AFRICAN HERP NEWS

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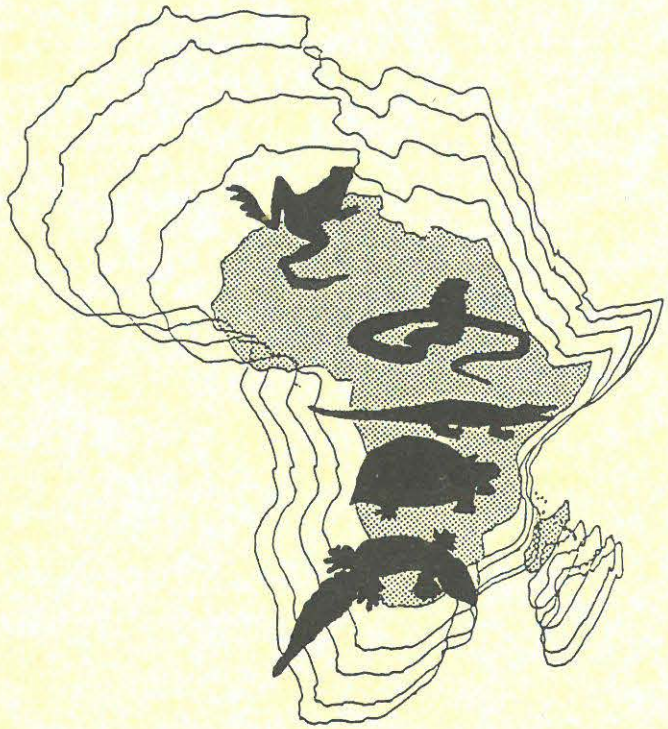
AFRICAN HERP NEWS

HERPETOLOGICAL ASSOCIATION OF AFRICA

NEWSLETTER



NOVEMBER 1991 NO. 16

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 *Journal of the Herpetological Association of Africa* (which publishes technical articles- subject to peer review, notes, book reviews and bibliographies) and *African Herp News* (HAA Newsletter) which includes news items, husbandry hints, announcements, etc).

Editor's note:

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

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

EDITORIAL

In this issue of *African Herp News* I have included speeches presented at the recent *Second H.A.A. Symposium on African Herpetology*, as well as photographs of delegates taken during the Official Dinner. H.A.A. members who did not make it to the symposium may find the latter of particular interest.

Members will be pleased to know that the Directors of the Transvaal Museum in Pretoria have kindly agreed to allow the H.A.A. to host the *Third H.A.A. Symposium on African Herpetology* at the Transvaal Museum in 1993. This symposium will celebrate the 50th year since the publication of FitzSimons' famous *Lizards of South Africa*, as well as the centenary of Transvaal Museum. However, the 1993 symposium is still in the early stages of planning, and no final dates can be given at this time. More on this will be published in a later newsletter.

The proceedings of the recent H.A.A. symposium held in Bloemfontein will be published in journal no. 40, due out early in 1992 .

The next issue of *African Herp News* will be a special one, namely Rod Douglas' *Bibliographic index to the Journal of the Herpetological Association of Africa 1-39.* I am sure members will find this publication particularly useful when doing research on African herps. The index has been completed and will be posted to members during the half of 1992.

This issue of *African Herp News* is the second and last for 1991. Due to my involvement with the H.A.A. symposium held during April of this year, it was not possible to produce three issues. However, this issue and the previous one are far more 'bulky' than usual!

Lastly, I would like to thank all contributors of articles and news items for this issue of *African Herp News.* I am pleased to say that members have been particularly supportive in submitting information.

All the best for 1992.

Mike Bates
Chairman/Newsletter Editor

PROCEEDINGS OF THE SECOND HAA SYMPOSIUM ON AFRICAN HERPETOLOGY

8 - 11 APRIL 1991

NATIONAL MUSEUM, BLOEMFONTEIN, SOUTH AFRICA

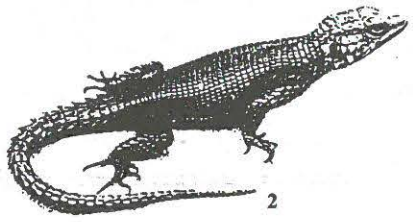
The *Second HAA Symposium on African Herpetology* was held from 8-11 April 1991 at the National Museum in Bloemfontein in South Africa. The symposium attracted 56 delegates from at least six countries, namely South Africa, Swaziland, Zimbabwe, Botswana, Germany and the United States. Forty-two papers, 13 posters, 6 slide shows and a computer program demonstration were presented. Numerous different topics were included, such as taxonomy, zoogeography, distribution, ecology, evolution, reproduction, reptile relocation, parasitology, reptilian disease and reptile husbandry.

Six Guest speakers were invited, namely Prof. JC Poynton (University of Natal, Durban, South Africa), Dr DG Broadley (Natural History Museum, Bulawayo, Zimbabwe), Prof. AM Bauer (Villanova University, Villanova, United States), Mr B Langerwerf (Agama International Herpetological Institute, Montevallo, United States), Mr S McKeown (Chaffee Zoological Gardens, Fresno, United States) and Mr HW Henkel (Germany). Prof. Poynton and Dr Broadley were later to receive the first two *Exceptional Contribution to African Herpetology* awards, presented during the Official Dinner at Oliewenhuis Art Museum (see further on).

The Symposium Committee spent several months organising the event, and at the end, felt satisfied that the occasion was well worth the effort. The HAA Committee has wasted no time in preparing for the next symposium, which is planned for 1993.

The proceedings of the symposium will be published in HAA journal no. 40, which is currently being prepared. The publication costs of this important document will be paid for by a very generous HAA member who wishes to remain anonymous.

It is hoped that the following pages will serve to remind delegates of the special occasion in Bloemfontein and at the same time provide those who were unable to attend with an idea of the proceedings.



WELCOME

Mike Bates, Chairman

I would like to take this opportunity to welcome all delegates to this, the *Second H.A.A. Symposium on African Herpetology*. May I extend a special welcome to our six **Guest Speakers**, namely **Prof. John Poynton** of the University of Natal, **Prof. Aaron Bauer** of Villanova University in the United States, **Dr. Donald Broadley** of the Natural History Museum of Zimbabwe, **Mr. Bert Langerwerf**, President of the Agama International Herpetocultural Institute in the United States, **Mr. Willy Henkel** from Germany, who is a renowned breeder of geckos, and **Mr Sean McKeown**, Curator of Reptiles at Chafee Zoological Gardens in the United States. I would also like to thank all overseas and local delegates for making such a great effort to travel to Bloemfontein, often from far afield.

The importance of personal contact with others in one's field of work cannot be underrated, and in this regard, symposia are of special value. This is the first H.A.A. symposium to which Guest Speakers have been invited, and I am sure that local herpetologists will be pleased to have the opportunity to meet our special guests, perhaps for the first time.

Unfortunately the H.A.A. has not been able to convene symposia on an annual basis, but the attendance here today, coupled with the record number of presentations, 62 in total, is an indication of the healthy status of both the H.A.A. and herpetology in Africa. As many of you will have noticed from the full programme, a variety of herpetological topics are to be covered during the symposium, including, amongst others, taxonomy, zoogeography, evolution, ecology, parasitology and reptile husbandry. There certainly appears to be an increasing interest in the herpetology of Africa, and it is my sincere wish that herpetological symposia will be held more frequently in the future.

The H.A.A. Symposium Committee are proud to have organized this meeting and hope that your stay in Bloemfontein, as well as your time at the National Museum, will be a pleasant one. We trust that this symposium will prove to be a success and that all delegates will benefit by the presentations as well as by making personal contact with others in their field.

I would now like to introduce **Dr. Chris Engelbrecht**, Director of the National Museum, who will be delivering the Opening Address.

OPENING ADDRESS

Dr C.M. Engelbrecht
Director, National Museum

It is my pleasure to be given the opportunity to address you on this exciting occassion. I am pleased that this, the second major symposium of the Herpetological Association of Africa, is being held at the National Museum.

In 1965, the membership of the *Herpetological Association of Rhodesia* voted in favour of being absorbed into the new *Herpetological Association of Africa*. At that time, the H.A.A. had a total membership of 72, but has grown from strength to strength, with a current membership of more than 300. It was only in 1975, however, that the first African symposium with herpetology as a theme was organised - by the Zoological Society of southern Africa. It was held at Skukuza in the Kruger National Park, with 24 papers on reptiles and amphibians being presented. In 1985, a one-day meeting was held at Pietermaritzburg, which formed part of the Zoological Society of Southern Africa annual meeting. Only 13 papers were presented on that occasion. The first major symposium of the Herpetological Association of Africa was held at the University of Stellenbosch in 1987. This three-day symposium was a great success, being attended by more than 70 delegates. A total of 42 papers and posters were presented. In 1988, the First H.A.A. Reptile Husbandry Symposium was held at Delta Park in Johannesburg.

During 1969, an international research group on African Anura was established. The 7th meeting of this group was held during January of 1991.

The growing interest in herpetology in Africa is reflected by the attendance here today, and if symposia such as this are held on a more regular basis, it is likely that an even greater interest in reptiles and amphibians will result.

Important contributions towards the field of herpetology by researchers at the National Museum include those by the late Dr. A.C. Hoffman during the 1940's and Dr. S.W.P. de Waal, who published the results of an intensive survey of the reptiles and amphibians of the Orange Free State in 1978 and 1980. The Department of Herpetology at the National Museum currently has five permanent staff members, conducting research on a variety of topics. It therefore seems appropriate that a symposium of this kind be held at this institute.

I wish you a pleasant stay in Bloemfontein and hope the symposium is a great success.

Thank you.

REPORT OF THE CHAIRMAN AND EDITOR OF *AFRICAN HERP NEWS*

Mike Bates

During the early part of 1990, a new H.A.A. Committee was elected. The new committee became functional in May 1990, eleven months ago, and what follows is a brief summary of the activities of the committee.

Firstly, I felt that it was important to ensure effective communication between Committee Members. For this reason, a series of Chairman's letters was initiated and sent to all committee members on a regular basis. Committee members were asked to comment on various matters concerning the Association and give their approval (or disapproval) on suggestions made by myself and other committee members. In order to discuss and debate a number of important issues, a one day H.A.A. Committee meeting was held in Bloemfontein in August 1990. This resulted in the compilation, by Rod Douglas, of a list of Functions for committee members, as well as Resolutions and By-laws aimed at ensuring the proper functioning of the H.A.A. and its Committee. One of the important decisions reached at the meeting involved the identification of functions for committee members, as these had been poorly defined in the past.

In the editorial of Newsletter no. 13, I wrote that it was my prime objective to ensure that the journal and newsletter appear more frequently, and promised that H.A.A. members would receive two journals and three newsletters per year for my term of office (1990-92). This promise has been upheld so far, and I hope that the age-old complaint about the H.A.A. publishing too little and too infrequently is now a thing of the past.

Since taking over as Newsletter Editor in May 1990, two issues of the newsletter have been published, namely numbers 13 & 14. As most of you will have noticed, the name, style, format and cover of the newsletter have changed. The title name was changed to *African Herp News*, which was considered more dynamic, but the basic function of the newsletter remains the same. I feel that the firm cover which is now being used is also an improvement, and although this is a small extra expense, I am pleased to announce that the cost per copy of *African Herp News has* been contained to well below R1,00.

I have been extremely pleased by the response of H.A.A. members with regard to the submitting of articles and other material for *African Herp News.* Articles and reports have been received from members in a number of southern African countries.

At this point, I would like to thank all Committee Members for their useful suggestions and co-operation so far. I would also like to acknowledge the dedication of Dr Bill Branch (Journal Editor since 1983) and Mr Rod Douglas (Secretary and Treasurer since 1985). It is with sadness that I must announce Rod's resignation as Secretary and Treasurer. As a working colleague of Rod's, I have gained an insight into the enormous amount of work involved, and can but only say that his services to the H.A.A. have

been invaluable. On behalf of the committee and membership of the H.A.A., I would like to express our sincere thanks to him for all his hard work during the past six years. Mr Vincent Carruthers has also resigned from the committee - on account of work commitments. In his absence, I would like to thank him, on behalf of the committee, for his participation over the pas eleven months. The committee has decided to co-opt Mr Gerald Haagner for the remaining term. I would like to welcome Gerald, who, I am sure, will prove to be a very valuable committee member.

Finally, it is my sincere wish that the H.A.A. should grow into an even bigger and more significant Association, and during my term as Chairman, I will most certainly do my utmost to ensure this.

Thank you.

Mr Mike Bates introducing the concept of an H.A.A. *Exceptional Contribution to African Herpetology* **award. This award ceremony took place at Oliewenhuis Art Museum during the Official Dinner.**

(photo: L.H. du Preez)

SECRETARY/TREASURER'S REPORT AS AT MARCH 1991

Rod Douglas

As at the above date, H.A.A. membership stood at 340 members (March 1987 [previous report]- 285). This comprised 202 African Members, as compared to 174 in March 1987 and 138 Overseas Members as compared to 111 in March 1987. Non-contributing Members included in this total are 10 Life Members as compared to 8 in March 1987, 6 Exchange Members as compared to 7 in March 1987 and 5 Legal Deposit Libraries as compared to 0 in March 1987.

Members may be aware that it was decided to discontinue Life Membership. The two additional Life Members noted above are: a Life Member who lost contact with the Association and has since decided to renew his affiliation, and the granting of Life Membership to Mr. J.L. Lawrence, son of the late Dr. R.F. Lawrence, as a token of appreciation for the bequeathal made by his father to the Association. During the 1987/88 period membership remained fairly static, reaching a high of 379 members during the 1989/90 period. This was largely due to members taking advantage of the newly introduced 3-year-membership rate and Scholar Membership.

The decline in membership since then can be attributed largely to the majority of Scholar Members not renewing their membership after the first year, and a sharp increase in the number of Ordinary Members falling more than two years behind with payments. During 1989, 25 members were removed from the membership list for being more than three years behind with payments, while in 1990, 39 members were removed for being more than two years behind with payments. At present, another 49 members are still not paid up for 1990. Unless these persons respond to the latest accounts, membership could well drop to below 300.

The books of the Association were closed on the 28 February 1991 for auditing purposes and the Receipts and Payment account is not yet available (was sent to all members with *African Herp News* # 15). At the time of closing the 1990/91 books, the H.A.A. finances were in a very healthy state, with the Nedplan 250 reserve account at R3 100.00, the Lawrence fixed deposit account at R12 535.00 and the U.B.S. account at R8 257.75, which included a considerable portion of 1991 memberships. This gave the H.A.A. a credit balance of R23 892.63.

Unfortunately this situation is not likely to remain healthy for very long. Exorbitant printing and production costs incurred by the previous Chairman for Journal #38, amounting to R14 000.01 for 1000 copies, have still to be paid (this debt has since been cleared). As a result, the Nedplan reserve account has had to be closed and monies transferred to the U.B.S. account. Monies will also have to be transferred from the Lawrence account in order to cover these costs, which will hopefully be paid off in instalments over the current financial year. Without the money from the Lawrence account being available, which was a once-off donation, and which the Committee voted

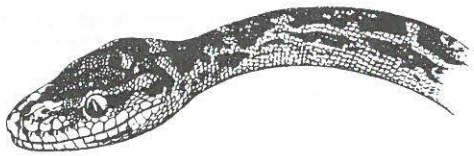
would not be used for such day-to-day expenses, the H.A.A. would have been totally bankrupt and unable to host this symposium.

It is hoped that this, the 2nd H.A.A. Symposium, unlike the 1st Symposium, will realize some profit which will help put the H.A.A. on a firmer financial footing. On the brighter side, efforts by the *African Herp News* Editor, Mr. Mike Bates, at keeping the printing costs of this publication down to only 64 cents per copy (this has now increased three-fold), has contributed considerably in keeping H.A.A. funds in credit.

As predicted in 1987, the United States Dollar/Rand exchange rate held above $2.50 to the Rand during the period, and this, coupled with high local interest rates, was instrumental in keeping the H.A.A. funds buoyant. It is felt that these two factors will not change significantly in the short to medium term, and will thus continue to contribute to the benefit of the Association for some time to come.

A method of paying monies directly into the H.A.A. Building Society account, as requested by some Overseas Members, turned out to be impractical and had to be discontinued. The possibility of accepting payments by credit card will be explored for both African and Overseas Members, with the deciding factor being the commission charged by the bank for handling transactions (this method of payment is not viable at present and will not be implimented).

Finally, I would like to return momentarily to our diminishing membership, and ask those of you here today, whom one must consider to be the hard core of the H.A.A. membership, why you are in fact an H.A.A. member? Is it because you or your secretary automatically pays your accounts for you, or is it because you feel a loyalty to an Association which represents your interest in African herpetology. From the reaction and response of new members over the years it is definitely not what the Association is offering its members. In the light of this, it would appear as if the time for complacency is past, particularly if the H.A.A. is to survive with any meaning, respect or creditability in a modern society.



EXCEPTIONAL CONTRIBUTION TO AFRICAN HERPETOLOGY AWARD

Introduced by Mike Bates

May I start by welcoming you all here tonight, to Oliewenhuis Art Museum, a satellite of the National Museum, and previously a State Presidents' residence. This is indeed an historical occasion. I say historical, as this is the first time an award ceremony forms part of an H.A.A. symposium programme, and also because the first two recipients of the award, as you will see later on, are indeed legendary figures in African herpetology.

The concept of an H.A.A. award ceremony was originally put forward by Dave Morgan and Gerald Haagner. This long-overdue idea was then put to the present H.A.A. committee, who, after much discussion, felt that a single kind of award, namely the *Exceptional Contribution to African Herpetology* award, should be presented. The idea of an award was also discussed and approved at an H.A.A. Committee meeting held in Bloemfontein in August 1990. At this meeting, one of our committee members, Dr. Ernst Baard, accepted the task of defining the criteria to be used in selecting candidates in the future. The H.A.A. committee was unanimous in choosing the first two recipients of the award, even though no criteria had been defined at the time, as these two persons would most certainly have qualified no matter how stringent the criteria.

At this point, I would like to thank Mr Rod Douglas for the tremendous effort he put into designing the awards, and Mr Louis du Preez, who put the finishing touches to the awards.

By presenting an award, the H.A.A. can show its appreciation to those who have been exceptional in furthering our knowledge of African Herpetofauna. The *Exceptional Contribution to African Herpetology* award was initiated with the purpose of honouring those who have been truly exceptional in their field, and will be presented only in exceptional cases and preferably during symposia.

I have asked Mr. Rod Douglas and Dr. Bill Branch to provide us with some details regarding the achievements of the first two recipients of the award. I now call on Rod Douglas to come forward to present one of the first two *Exceptional Contribution to African Herpetology* awards. Dr. Bill Branch will present the 'second' award.

EXCEPTIONAL CONTRIBUTION TO AFRICAN HERPETOLOGY

Presented by Rod Douglas, National Museum, Bloemfontein

JOHN C. POYNTON
Born 1931 in Pretoria, South Africa

It is with great honour and pleasure that I have been asked to present one of the first *Exceptional Contribution to African Herpetology* awards. It is just as great an honour and pleasure to be presenting this award to one of Africa's great herpetologists, **Prof. John Poynton**.

When one is asked to perform this type of presentation, it is not only necessary to do justice to the recipient, but to the occasion as well. In order to assure a certain correctness, the recipient is usually asked for a resume in order to assist the presenter in his task. Now sometimes it is possible to draw some conclusions about a person's character by the resume he or she has submitted, not only from it's length, but also from the manner in which it was written. In some instance, a resume may turn out to be an autobiography, detailing everything from the regularity of nappy changes as a baby to the person's favourite restaurant, while others leave one in no doubt that the writer felt that he or she had definitely been overlooked for the no lesser position than that of a monarch. On the other hand, there are also those resumes which are unpretentious and unassuming, and in which the writer would have you believe that he or she had done nothing to warrant receiving any award at all.

For those of you who know Prof. John Poynton, it will not be hard to imagine into which category his resume fell. Yes, his resume fell into the last category, and in his extreme modesty, he submitted 16 lines on his extremely productive life of diverse and great achievement. Therefore, if there are any obvious gaps with which I have not acquainted myself, and I am sure there are many, you are kindly asked to excuse me for these omissions.

Prof. John Poynton was born in Pretoria in 1931 and completed his schooling at Michael House in Natal. He then enrolled at the University of Natal, where he gained his MSc degree on amphibian behaviour, and more specifically the humidity reaction of frogs and toads. The thesis was completed between attending classes at the College of Music at the University of Cape Town. In 1958, Prof. Poynton accepted a lecturing post in zoology at the Univerity of Natal, Pietermaritzburg, gaining his PhD degree for a taxonomic revision and biogeography of the Amphibia of Southern Africa. In 1965, he accepted a senior lectureship in zoology at the University of the Witwatersrand, and later moved to the Parapsychology Foundation of New York as a researcher. It was then back to the University of Natal in 1971 with an appointment to teach medical biology and co-ordinate the first-year medical course. In the Biology Department at the Univerity of Natal, Prof. Poynton has built up a school of biogeography, which centers mainly on urban open space surveying, design and management. The position

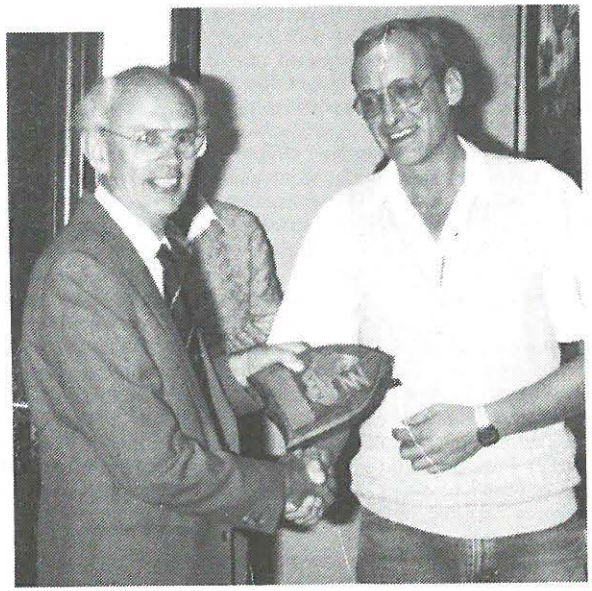
of Associate Professor was conferred on him in 1982, and during the same year he was made an Honorary Research Associate at the Natal Museum, where his herpetological work has been centered. Yet another great honour accorded him in 1982 was his election as an Honorary Member of the American Society of Ichthyologists and Herpetologists. Full professorship was bestowed on him by the University of Natal in 1988. Two other significant honours bestowed upon Prof. Poynton were the naming of a new genus of frog (*Poyntonia*) after him by Alan Channing and Richard Boycott, and the naming of a new species of *Cacosternum*, *Cacosternum poyntoni*, by Angelo Lambiris.

As you may have gathered, Prof. Poynton has been involved in a variety of scientific interests, and needless to say, this diversity is reflected in his 68 published works. Starting his publishing career in 1959 with *Zoogeography - a study in science history*, Prof. Poynton's interest was more orientated towards biogeography, zoogeography and distribution patterns of amphibians, rather than specific studies. However, from 1963, Prof. Poynton became more involved with the taxonomy and ecology of the amphibia, with *Description of Southern African amphibians* appearing in 1963 and *The amphibia of Southern Africa: a faunal Study*, in 1964. His research was not only limited to South African amphibians, but included east Africa and countries such as Mozambique and Zimbabwe. Being a true scientist, his ever-enquiring mind also led him into the field of neurological, behavioural and breeding aspects of amphibia. During this period, Prof. Poynton also described a new species of *Probreviceps* and a new subpecies of *Rana* from Zimbabwe. From 1973 to 1975, Prof. Poynton concentrated on one of his other interests - Parapychology, with papers such as *Parapychology and the biological science* and *Results of an out-of-the-body survey* being published. It is obviouly impossible to list all of Prof. Poynton's publications, but suffice to say that from 1976 to date, examples of the diversity of his subject matter includes **herpetology** - The Amphibia of Maputaland; **biogeography** - Amphibian biogeography: facts in search of Quaternary theory; **classification** - Classification of the Arthroleptinae ; **evolution** - Evolutionary activity in the southern part of Africa: evidence from the amphibia; **urban open pace ecology** - Central and peripheral urban open spaces: need for biological evaluation; **Parapychology** - Concious states and physical death; and **philosophy of science** - Holistic thinking in medicine: pitfalls and possibilities.

One of Prof. Poynton's most comprehensive and definitive studies is the four-part series *Amphibia Zambeziaca*, on which he worked in collaboration with Dr. Don Broadley. This study covers the amphibian species occurring in Botswana, Zambia, Malawi, Mozambique, Zimbabwe, Namibia and the eastern Caprivi trip. The first and second parts were published in 1985, with the third part in 1987 and the fourth in 1988. A final part on zoogeography has already been completed and is due for publication in October this year.

We are most fortunate to have here with us this evening an excellent example of what I know to be one of Prof. Poynton's proudest achievements, and about which he may be rightfully proud. This part of his work appears neither in his resume nor his *curriculum vitae*, but is a part of his work in which he saw a great and vibrant potential, and which I am led to believe, sometimes painstakingly nurtured through to full fruition - Dr. Don Broadley, his former student.

The *Herpetological Association of Africa* is proud to be able to honour here tonight one of Africa's great herpetologists, a man who has contributed not only significantly to African herpetology, but also to our knowledge and undertanding of African amphibians. This has been no mean task, and has been achieved over many, many years of hard work and productive research. It is therefore my pleasure to ask Prof. Poynton to come up and receive his *Exceptional Contribution to African Herpetology* award.



Prof. John Poynton (left) receiving his *Exceptional Contribution to African Herpetology* award from Mr Rod Douglas (right) during the Official Dinner at Oliewenhuis Art Museum.

(photo: L.H. du Preez)

EXCEPTIONAL CONTRIBUTION TO AFRICAN HERPETOLOGY

Presented by Bill Branch, Port Elizabeth Museum

DONALD GEORGE BROADLEY
Born 29 May 1932, Stamford, Lincolnshire, England

Mr Chairman, honoured guests, ladies and gentlemen:

If I may start this talk on a personal note, Don Broadley has been a continual source of inspiration and ever-willing advice for the last 20 years. I therefore feel very privileged tonight to be given the opportunity to present this award on behalf of the HAA. For those members unaware of Don's herpetological beginings, I shall start by giving some detail of his early history (for which he has kindly given me permission).

Don's education was affected by World War II and its immediate aftermath. On being discharged after serving two years (1950-1952) of conscripted service in the Royal Air Force, Don moved to the British Ordinance Survey Unit at Southampton in Hampshire. There he started to collect the reptiles that were to transform his life. Within two years he had caught all six British reptiles, including the rare smooth snake and sand lizard. His sights were soon set on larger things; richer herpetofaunas. Africa beckoned.

Initially he applied for the post of Curator at the Corydon Museum in Kenya. This post had once been held by Arthur Loveridge, whose mantle as Africa's foremost herpetologist Don was soon to take over. The Kenyan post was unavailable, so instead he took a job as a draughtsman with the Town Planning Department in Salisbury, Rhodesia (now Zimbabwe). Taking up this post in October 1954, he soon felt constrained by city life and within a few years he became a 'mud doctor' with the Roads Department and moved to a field station near Bulawayo. At weekends he began, voluntarily, to curate the small herpetological collection at the local museum. His own field trips, and the encouragement to collect of colleagues working on road construction, soon resulted in numerous new discoveries. To solve some of these problems of identification, correspondence with Arthur Loveridge at the Museum of Comparative Zoology at Harvard ensued, and soon resulted in one of Don's earliest papers. It reveals much about Don's attitudes that in subsequent years we were to see him make such an outstanding contribution to African herpetology. It is entitled 'The Herpetology of Southern Rhodesia. Part 1. Snakes'. The enthusiasm for reptiles that had brought him to Africa was not to be satisfied with simple papers. A continental herpetofauna needed to be studied. It was a wide-open field, and Don threw himself into it with a vengence.

In 1957 his enthusiasm led to the founding of the Herpetological Association of Rhodesia - our forerunner. A stream of new descriptions and regional surveys soon led to recognition of his abilities by Ray Smithers, then Director of Museum Services in the

country. A short, unhappy period as the curator of the Isemonger Snake Park in Salisbury was soon followed by an offer of the post of Zoologist at either Salisbury or Umtali Museum. As could be guessed, Don chose the latter, foregoing the comforts of the city to be nearer the action in the unstudied mountains and rain forests of the eastern escarpment. All was not well, however. Grumbles about his lack of a formal academic education appeared. Fortunately, at this time Don was in contact with J.C. Poynton, our other illustrious guest this evening. At the time, 'JC' was working on his seminal monograph of the amphibians of the subcontinent. The University of Natal at this time was considering introducing an accelerated degree, whereby naturalists who lacked academic qualifications, but who had shown their competence by their scientific publications, would be allowed to enrol immediately for an M.Sc degree. Some of the other herpetologists gathered here tonight, including Angelo Lambiris, are indebted to Don. He was the guinea pig, invited via 'JC' to initiate the course. Don was the first student to prove the advantages of this farsighted policy. He enrolled in 1961, and chose as his MSc thesis **the taxonomy of the lizard genus** *Platysaurus*. Typically, during a short study visit to Natal in 1962, he took the opportunity to describe a new subspecies of *Philothamnus,* as well as unravel some taxonomic problems concerning Drakensberg *Pseudocordylus.* His thesis was awarded *cum laude* in 1964, quickly followed only two years later by a PhD thesis summarizing the herpetology of the whole of southeast Africa (later to become known as *Zambeziaca*).

Since then, Don's studies have continued unabated. He has published approximately 150 scientific papers on the taxonomy, zoogeography and ecology of African reptiles, with a few additional papers on amphibians. Definitive revisions include those of the genera *Natriciteres* in 1966, *Lycodonomorphus* in 1967, *Typhlosaurus* and *Naja* in 1968, *Acontias* in 1969, *Elapsoidea, Amblyodipsas* and *Xenocalamus* in 1971, *Nucras* in 1972, *Leptotyphlops* in 1976, *Psammophylax* and *Psammophis* in 1977, *Platysaurus* in 1978, *Thelotornis* in 1979, *Prosymna* in 1980, and *Pelusios* in 1981. In between he published numerous revisions of smaller species groups, and in 1983 completed a comprehensive and masterly revision of *FitzSimons' Snakes of southern Africa*, to which an addendum has been added in the latest reprint.

It will surprise no one that during his forthcoming retirement, Don plans to complete his *magnum opus* - **Reptilia Zambeziaca** - the herpetology of SE Africa, Part 1 of which he started soon after his arrival in Africa, nearly 40 years ago. We all eagerly await its publication.

The excellence of Don's work and his outstanding contributions to African herpetology have been recognized by many institutions. He is a Scientific Fellow of the Zoological Society of London, Fellow of the Linnean Society of London, Honorary Life Member of the British Herpetological Society, and Honorary Foreign Member of the American Society of Ichthyologists and Herpetologists. The latter is limited to only 10 living herpetologists. He also serves as a Member of the IUCN African Reptile and Amphibian Specialist Groups, and of the Tortoise and Freshwater Turtle Specialist Group. In 1977, the HAA awarded Don Broadley Honorary Life Membership. Tonight we take great pleasure in reitterating our esteem. The HAA is honoured that Don should be with us tonight, and to receive the HAA's *Exceptional Contribution to African Herpetology* award. It is a small but hopefully pleasant tribute from his colleagues and friends.

Dr Donald Broadley and Dr Bill Branch at the Official Dinner at Oliewenhuis Art Museum.

(photo: L.H. du Preez)

Delegates at the Official Dinner, from left to right: Prof. Alan Channing, Dr Orty Bourquin, Mr Lynn Raw, Mr Wulf Haacke and Dr Donald Broadley.

(photo: L.H. du Preez)

CLOSING

Mike Bates

As is traditional at the end of a symposium, the time has come to acknowledge the assistance of those involved in organizing the event. I think it would be appropriate for me to start by thanking the other members of the team, namely Rod Douglas, Alex Flemming, Louis du Preez and Simon Mosala. Unfortunately it would take too long to list all the numerous activities of each member of the Symposium Committee, but suffice it to say that a better and more dedicated team would have been difficult to find.

I would like to thank H.A.A. Committee Members for their many ideas, comments and suggestions. I also thank Mrs Ann Douglas, Mrs Krista du Preez and Miss Mindi du Plessis for their invaluable help with arrangements, as well as Dr. Chris Engelbrecht, Director of the National Museum, and his staff, for their support. I thank Mr Gert van Jaarsveld, who, without asking for financial retribution, was responsible for the preparation of the meat during the Official Dinner. Spoornet sponsored the symposium folders, paper pads, pens and name tags, and went out of their way to satisfy our particular needs.

Mrs Hanelien de Villiers, typist at the National Museum, was responsible for virtually all the typing needed to compile the programme and abstract book, and her competent efforts are much appreciated. Thanks also go to the Caretakers of the National Museum for their cooperation, and the Tearoom staff for their efforts in the realm of hygiene. Mr. André Truter is thanked for photographs taken, and the staff of the museum's library are thanked for not experiencing collective heart failure as the photocopying machines worked feverishly to keep up with their enormous workloads. The University of the Orange Free State are thanked for loaning various items needed during the Symposium. I also wish to thank Russel Freedman for supplying books, Country Caterers for meals, Bloemfontein Technikon for free use of their poster stands, Mr Piet Karelse (Caretaker of Oliewenhuis Art Museum), Mr. Johan Marais for initial correspondence with some of the Guest Speakers, and all the session Chairman for their enthusiasm.

To the many nameless individuals who helped in some or other small way, thank you. Last and not least, may I thank all delegates who attended this symposium. Although it did not appear so at first, due to late returns of Intention Forms, this symposium has received almost total support from local herpetologists, not to mention many others. As you may have realized, the symposium could quite easily have covered five days. Hopefully this indicates a fruitful future for herpetology in Africa.

Thank you and go well.

SNAKES ALIVE!

Reprinted from *Nu Focus* 2(3): 4, University of Natal, 1991

The University of Natal can once again lay claim to being a leader in research - this time in the field of herpetology, the study of reptiles and amphibians.

At a Herpetological Association of Africa symposium held recently at the National Museum in Bloemfontein, 2 of their members were honoured with awards for their exceptional contribution to African herpetology: Professor John Poynton (BSc 1951 PhD 1961) of the Department of Biology on the Durban campus, and Dr Don Broadley (MSc 1964 PhD 1967) of the Natural History Museum in Bulawayo, Zimbabwe, both graduates of the University of Natal.

"The University has gained prestige through the awards given to us by the Association, which is a well-established and internationally recognized society", said Poynton. Broadley studied under Poynton's guidance in the Zoology Department on the Pietermaritzburg campus. "Don Broadley was an 'R33' student, which means that he was admitted to a research degree without any formal prior degrees," says Poynton. "He was the first student to enter under this rule and the success which he gained in the world of herpetology justified the idea of admitting people who had not gone through the usual academic channels".

Poynton lectured on the Pietermaritzburg campus, spent a short time at Wits and then came to the Durban campus, where he has been since 1971.

"The award from the Herpetological Association consisted of honorary life membership of the Association, which I already have, as well as a commemorative shield". He adds that the award complements an Honorary Foreign Membership award made to him in 1982 by the American Association of Ichthyology and Herpetology. This award is made to just 15 members at any one time - further awards are made only on the deaths of current holders.

Broadley is also an honorary foreign member of the American Association. He and Poynton are the only 2 people living in Africa to have been awarded this recognition - they are also the only 2 to have received awards from the Herpetological Association of Africa.

Submitted by: Dr. Orty Bourquin, Natal Parks Board, P.O. Box 662, Pietermaritzburg, 3200 South Africa.

FIRST SOUTH AFRICAN CROCODILE SYMPOSIUM

On 21 June 1991 the **Crocodilian Study Group of Southern Africa**, in conjunction with the Department of Animal Science, University of Pretoria, staged the *First Symposium on Crocodile Production* in the Republic of South Africa.

The venue was the Faculty of Law and Education at the University of Pretoria, where 157 delegates attended a very successful symposium. The delegates included farmers affiliated to the Transvaal Crocodile Breeders Association, The Nile Crocodile Farmers Association, producers from Brazil, Botswana, Mozambique, Zambia, Zimbabwe, all regions of the R.S.A. and academics, accountants, businessmen, conservationists, insurance brokers, herpetologists, journalists, palaeontologists, students and veterinarians interested in crocodiles.

A wide spectrum of relevant topics were addressed by invited speakers which included Dr. Chris Foggin - Diseases affecting farmed crocodiles; Dr. Richard Luxmoore - CITES and its implications on the crocodile industry; Dave Blake - The status of *Crocodylus niloticus* in the wild; Prof. Leon Brummer - A financial model for crocodile farming; Quinton Coetzee - Crocodiles: A tourist attraction; Dr. Niels Jacobsen - Crocodiles and the law; Johan Marais - The status of crocodile farming in South Africa and crocodile husbandry; Prof. Gerrie Smith - Nutrition of crocodiles & Facilities and technology for commercial crocodile production and Dr. Mark Verseput - Collecting specimens for veterinary diagnosis. Two further papers, the authors of which could unfortunately not attend the symposium, were received: Kevin van Jaarsveldt - The skin trade: Past, present & future and Tony Pooley - An update on crocodilian literature.

These papers are currently being refereed and will be published as chapters in a handbook on crocodile farming in South Africa. This handbook will be available soon and persons interested in obtaining copies are requested to write to the Crocodilian Study Group of Southern Africa.

The co-ordinators of the Crocodilian Study Group of Southern Africa wishes to thank all the speakers, delegates and others who supported this effort, especially our producers who made valuable information available, thereby contributing to the success of the symposium.

Persons or institutions interested in obtaining copies of the handbook should write to: The Co-ordinators, Crocodilian Study Group of Southern Africa, Department of Animal Science, University of Pretoria, 0002, Republic of South Africa.

Submitted by: Mr Johan Marais, Manyane Game Lodge & Crocodile Farm, P.O. Box 3, Buhrmannsdrif, 2867 South Africa.

OBITUARY

Leonard A.C. Hoffmann (1959-1991)

Leonard Andrew Charles Hoffmann, born on June 1, 1959, passed away on September 8, 1991. With his unexpected death, the South African herpetological community has lost a valuable member whose full potential had not yet been reached.

During his years at Cape Town High School he excelled at playing chess, competing in the South African Open Chess Championship. He received the Toastmasters International Youth Leadership Program Certificate, as well as the Wall's Amateur Athletic Association Four Star Award. After matriculating, he spent two years in the South African Infantry Corps and qualified as a dog handler. In 1985, he was awarded a B.Sc. (Hons.) degree by the University of Cape town.

While still a student, Leonard was temporarily employed as a student ranger at the Cape of Good Hope Nature Reserve, Cape Town. Subsequently, he took a post as nature conservator with the Department of Agriculture and Nature Conservation in Namibia, and was variously stationed at Okaukuejo, Namutoni and Otjovasandu in the Etosha National Park during the period 1983 to 1984. He was also in the employ of the Desert Ecological Research Unit at Gobabeb, Namibia. After his time in Namibia, he was employed by the KwaZulu Government Service as a biology lecturer at the Owen Sithole College of Agriculture, Empangeni, KwaZulu. In 1987, he was appointed as assistant nature conservation scientist by the Chief Directorate Nature and Environmental Conservation, Cape Province. He was initially based at Jonkershoek, Stellenbosch, but was later transferred to Grahamstown. In conjunction with his duties, he continued with his studies and was subsequently awarded an M.Sc. degree by the University of Natal in March 1991. His dissertation, supervised by Prof. John C. Poynton, comprised a biogeographical study of the herpetofauna of the Owen Sithole College of Agriculture.

Leonard was a renowned nature and wildlife photographer, and his photographs grace the pages of many magazines, both locally and internationally. His photographs bear witness to his love of nature, and their quality portrays his dedication and talent.

However, it was Leonard's excellent writing skills which distinguished him. His list of publications include five refereed, full-length papers and 36 semi-scientific and popular articles on various topics, ranging from the ecological importance of frogs and toads to venomous snakes of Zululand, to the colourful "helicopters" of the insect world - dragonflies. He authored a picturesque book on Cape Point and the Cape of Good Hope Nature Reserve, and initiated *Hoffmann's Gallery,* an occasional bulletin with news, views and reviews on conservation issues.

Leonard Hoffmann was a student of nature - always keen to learn more. He was a respected colleague, and most of all, a true friend who will be fondly remembered by all. His memory lives on.

Submitted by: Ernst H.W. Baard, Chief Directorate Nature & Environmental Conservation, Private Bag 5014, Stellenbosch, 7600 South Africa.

IUCN SPECIES SURVIVAL COMMISSION

ESTABLISHES DECLINING AMPHIBIAN POPULATIONS PROGRAM

Habitat destruction and species extinction have been of increasing public concern in recent years. One facet of these global phenomena is that of the widespread decline of frogs. Following an international symposium on this topic in 1990, a clear concensus emerged as to the world-wide character of the problem and the need for immediate action. Although the amphibian declines are not consistently noted at all locations, nor among all species, the magnitude is undeniable. Certain characteristics of amphibians (e.g. biphasic life cycle, permeable skin, etc.) may be responsible for their sensitivity to varying environmental conditions. For this reason, the densities of many frog species may serve as early indicators of environmental stress in ecosystems.

In response to this concern the International Union for the Conservation of Nature has activated the Declining Amphibian Populations Task Force (IUCN DAP Task Force). The focus of this program is to provide a global co-ordinating centre for investigators and agencies concerned with documenting and determining the causes of these declines. Dr David B. Wake (University of California, Berkeley) chairs the DAP Task Force, and Dr James L. Vial (University of Tulsa) is the overall co-ordinator. I have been invited to join the directorate as a regional representative for South Africa.

It is intended that I organize a DAP Work Group to gather, collate and deciminate information on declining amphibian populations on the subcontinent. This group will consist of a Scientific Advisory Committee, and it is intended to apply for funding to initiate integrated monitoring studies. When available, these will be under the control of site co-ordinators.

I therefore invite interested herpetologists to contact me if they have any information (anecdotal or otherwise) on declining frog propulations in southern Africa. I am particular keen to make an inventory of threatened or sensitive habitats. Examples of recent declines in frog populations, and observations of known or suspected causes for these declines, are a high priority. Although there have been few ecological studies on frogs in southern Africa, researchers may have gained subjective assessments of frog abundance during systematic surveys or behavioural studies (eg. vocalization). Their comments would be welcomed. Possible sites for the initiation of base-line studies on healthy frog populations are also invited. Researchers interested in partaking in such studies should contact me at the address below.

Dr W.R. Branch, Curator of Herpetology, Port Elizabeth Museum, P.O. Box 13147, Humewood, 6013 South Africa.

DECLINE OF FROGS TO BE STUDIED

The Citizen, 19 September 1991

PORT ELIZABETH. - A task group, under the auspices of the International Union for the Conservation of Nature, has been formed to investigate a worldwide decline in frog populations.
Southern African research co-ordinator, Dr Bill Branch, said here yesterday frog populations were declining, even in pristine environments.
He said the international task group would try to determine the extent of the phenomenon and identify common problems.
Editor of the Southern African Red Data book on reptiles and amphibia, Dr Branch identified the Cape Flats as one of the problem areas in the country, due to a rapid rate of urbanisation there. - Sapa.

Submitted by: Mr Simon T. Mosala, Department of Herpetology, National Museum, P.O. Box 266, Bloemfontein, 9300 South Africa

RESULTS OF AMENDMENTS TO THE CONSTITUTION OF THE HERPETOLOGICAL ASSOCIATION OF AFRICA AS PRESENTED IN *AFRICAN HERP NEWS* #15

By a majority vote, African Members of the H.A.A. have accepted the new clauses (5; 5.4; 5.5) to the H.A.A. Constitution as presented in *African Herp News* #15.

Only one negative vote was received for clause 5.5, which has been an unwritten part of the Constitution for many years. The member objected to the clause on the grounds that neither the H.A.A. nor its members really benefit from exchange publications. This is only partially true, as it is felt that the publicity and public relations value gained by the H.A.A. through the distribution of a few exchange publications far outweighs the small expense involved.

CHANGE OF ADDRESS

Mr Johan Marais' new address is:

Manyane Game Lodge & Crocodile Farm
P.O. Box 3
Buhrmannsdrif
2867 South Africa

Tel.: (0140) 32144

(His old address was P.O. Box 73/414. Botha's Hill, 3660 South Africa).

HERP-INFO

Advertisement rates:

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The Editor retains the right to exclude any advertisement from publication. The Editor will presume that any persons placing advertisements and/or responding to advertisements shall be fully aware of any regulations and laws governing the sale of reptiles and amphibians in his/her area, and no correspondence will be entered into as regards these matters. Neither the Editor nor the H.A.A. shall be held responsible for any legalities or claims arising from advertisements.

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WANTED

Californian Kingsnake male (*Lampropeltis getulus*), banded phase urgently required. Rod Douglas, P.O. Box 266, 9300 Bloemfontein. B (051) 479609; H (051) 365052.

Female Iguana iguana. Rod Douglas, P.O. Box 266, 9300 Bloemfontein. B (051) 479609; H (051) 365052.

Python regius information. Anyone with information concerning *Python regius* (Ball python), please write or call for a survey information packet. Greg Greer, Chattahoochee Nature Center, 9135 Willeo Road, Roswell, Georgia 30075, U.S.A. Day (404) 992-2055, Night (404) 952-3737.

Copies of the following books:
Channing, A. & Van Dijk, D.E. (1976). *A Guide to the Frogs of South West Africa.* University of Durban-Westville Press, Durban.
Stewart, M.M. (1967). *Amphibians of Malawi.* State University of New York Press.
Auerbach, R. (1988). *Reptiles and Amphibians of Botswana.*
Barry Porter, Game Valley Estates, P.O. Box 70, Richmond, Natal, 3780 South Africa.

FOR SALE

The Reproductive Husbandry of Pythons and Boas. For sale or to swop. Scott Allen, 77 Baronwood Court, Brampton, Ontario L6V 3H7 Canada.

MEDIA RELEASE

Chief Directorate: Nature and Environmental Conservation, Private Bag 9086, Cape Town 8000

Calendar for 1992

A calendar for 1992 has just been released by Cape Nature Conservation. The theme is **frogs**, and the aim of the calendar is to make the public aware of the numerous scarce and very special frog species occurring in the Cape Province.

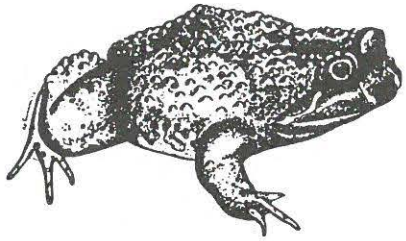
More than half of all frog species in South Africa are found in the Cape Province. Furthermore, of the 62 different frogs occurring here, 29 are endemic taxa.

Photos in full colour of representatives of the six frog families in the Cape Province are shown. Among those included are the Micro frog, one of the world's smallest frogs, with adults reaching a length of less than 2 cm, and the Cape river frog, which reaches a length of up to 12 cm.

Each frog has its own story, which is told on the calendar. Interesting features of strange creatures like the Table Mountain ghost frog, which occurs only on Table Mountain and nowhere else in the world, are described. This frog clearly merits its description as one of the South African frog species with the smallest distribution areas.

In releasing this calendar, the aim is not only to convey information about these slippery creatures, but also to draw attention to these small, unobtrusive and often neglected wonders of nature.

The calendar is available from Cape Nature Conservation at Private Bag 9086, Cape Town 8000, at R12,00 each, or tel. (021) 4834227.



Holotype of *Poyntonia paludicola*, PEM A1600.

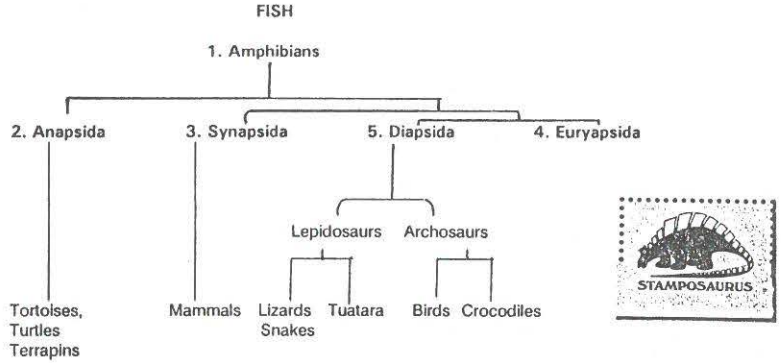
HERPETOFAUNA ON STAMPS

PART 2 : PREHISTORIC HERPETOFAUNA

O. BOURQUIN

Natal Parks Board, P.O. Box 662, Pietermaritzburg, 3200

Evolution of the herpetofauna followed (very roughly!) along the following lines:



Stamps depicting animals from these groups are listed below in the numerical order given in the diagram. I have left out some stamps, deliberately in some cases as they are not listed in the Stanley Gibbons Stamp Catalogues, and inadvertently in those cases (few I hope) where I do not have the information. I would welcome someone rubbing my nose in omissions or mistakes! The country name and date in brackets indicates that a stamp was issued there, and then.

1. Amphibians

Ichthyostega (Poland 1968) was an ancient amphibian from 315 - 280 mya (million years ago). A later genus Seymouria (Vietnam 1984) was part of the last offshoot of the amphibian line which finally developed into the reptiles, while Mastodonsaurus (Poland 1966, Kampuchea 1986) lived 200 -220 mya (million years ago). More recent fossils (± 25 mya) of the anurans Paleobatrachus grandipes (Czechoslovakia 1968) and P. diluvianus (East Germany 1978) are depicted, while Libya (1985) brought out a stamp showing a fossilized frog. I haven't seen the stamp yet and have not been able to find out which species is represented.

Finally, Switzerland (1959) printed a stamp showing an Andrias scheuchzeri (a giant salamander) fossil. Two species of the genus still exist, one in Japan (A. japonicus) and one in China (A. davidianus).

Ichthyostega

Mastodonsaurus

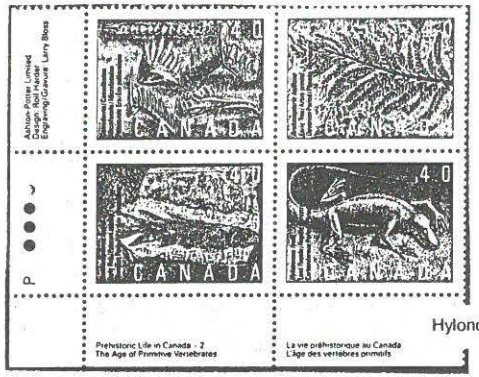
Andrias

2. Anapsida

Some of the earliest known reptiles are found in this group and two representatives are depicted on stamps:-

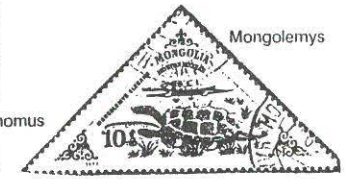
Bradysaurus (South Africa 1982), a 5 m long stem reptile from about 250 mya.
Hylonomus lyelli (Canada 1991) from the Carboniferous period (295 - 310 mya) in Nova Scotia.

The Anapsid line led to the chelonians, and a much later fossil terrapin from 120 - 70 mya, Mongolemys elegans is shown on a stamp from Mongolia 1977. A tortoise fossil is depicted by Wallis & Futuna (1990) but I have not yet seen the stamp and don't know what species is represented.



Hylonomus

Bradysaurus



Mongolemys

3. Synapsida

This reptile group evolved into the mammals of today, and their representatives on stamps are as follows:

Cynognathus Poland 1966.
Dimetrodon Guinea 1987; Mali 1984; Nicaragua 1987; St Thomas & Prince Isls 1982; Vietnam 1984.
Edaphosaurus Kampuchea 1986; Maldive Isls 1972; Poland 1965.
Endothiodon Mocambique 1971.
Lystrosaurus South Africa 1982.
Moschops Congo Republic 1975.
Naosaurus Fujeira 1972.
Oudenodon Zambia 1973.
Thrinaxodon South Africa 1982.

Naosaurus

Oudenodon

Dimetrodon

4. Euryapsida

Stamps depicting these marine reptiles, all of which had become extinct some 70 mya include the following:

Cryptocleidus Congo Republic 1975; Poland 1965
Elasmosaurus San Marino 1965
Mesosaurus Poland 1965.
Pleslosaurus Vietnam 1979
Thaumatosaurus victor San Marino 1965

A bizarre reptile group in the Euryapsida were the Placodentia - represented by Placochelys placodonta on a Hungary 1969 stamp. The animal was heavily armoured, turtle-like in appearance, and probably ate molluscs.

Elasmosaurus

Mesosaurus

Placochelys

5. Diapsida

The archosaurs, dominant large animals in the Mesozoic period (70 - 190 mya) are runaway favourites as illustrations on stamps, in particular that group from which modern birds evolved, the dinosaurs. They contained some of the largest land living animals the world has known, and also some of the most terrifying carnivores. Some of the herbivorous dinosaurs are believed to have been up to 30 m in length eg. Ultrasaurus, while the largest carnivores dinosaur was the well-known Tyranosaurus rex, with a length of 14 m. Flying reptiles also include some giants with wing spreads of up to 15 m. However - you'll have to look up details of the animals yourselves- there's no space here! Dinosaurs depicted on stamps are listed alphabetically hereunder:-

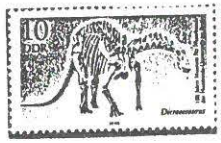
Allosaurus - Central African Republic 1988; Vietnam 1984.
Anatosaurus - Benin, 1984.
Angolasaurus bocagei - Angola, 1970.
Ankylosaurus - Central African Republic 1988.
Brachiosaurus - Congo Republic 1970; Central African Republic 1988; East Germany 1990; Poland 1965; San Marino 1965; Vietnam 1984.
Brachiosaurus brancai - Kampuchea 1986.
Brontosaurus (now = Apatosaurus) - Benin 1984; Central African Republic 1988; Cuba 1984; Hungary 1990; Poland 1965; San Marino 1965; Tanzania 1987; Vietnam 1979; St Thomas & Prince Isls 1982; Fujeira 1972; USA 1970, 1990; Aden 19??.
Carnivorous dinosaur footprints - Lesotho 1984.
Ceratosaurus nasicornis - Laos 1988.
Cetiosaurus mogrebiensis - Morocco 1988.
Corythosaurus - Congo Republic 1975; Poland 1965.
Dicraesaurus - East Germany 1990.

Brontosaurus

Brachiosaurus

Dimorphodon - Hungary 1990.
Dinosaur footprints - Lesotho 1970.
Dinosaurus - Aden 19??.
Diplodocus - Maldive Isls 1972; Vietnam 1984.
Dysalotosaurus - East Germany 1990.
Estegosaurus - Cuba 1984.
Euparkeria - South Africa 1982.
Gryptonyx - Lesotho 1970.
Hylaeosaurus - Cuba 1987.
Iguanodon - Guinea 1987; Mali 1984; Vietnam 1979; San Marino 1965; G. Britain 1991; USA 1970.
Iguanodon bernissartensis - Belgium 1966; Laos 1988.
Iguanodontus - Cuba 1984.
Kentrosaurus - Congo Republic 1970.
Kentrurosaurus - East Germany 1990.
Lesothosaurus - Lesotho 1984.
Machairodus - Poland 1966.
Massospondylus - Lesotho 1970.
Monoclonius - Cuba 1984.
Mozasaurus - Vietnam 1979.
Paleosaurus - Tanzania 1987.
Parasaurolophus - St Thomas & Prince Isls 1982.
Platesaurus - Tanzania 1987.
Plateosauravus - Lesotho 1970.
Protoceratops - Mongolia 1967; Great Britain 1991.
Psittacosaurus mongoliensis - Mongolia 1977.
Pteranodon - Cuba 1984; Maldive Isls 1972; San Marino 1965; USA 1990; Vietnam 1979; Tanzania 1987; Nicaragua 1987.
Pterodactylus kochi - East Germany 1973.
Rhamphorhynchus - Benin 1985; Dahomey 1974; Kampuchea 1986; Vietnam 1984; Poland 1965.
Sauroctonus - Kampuchea 1986.
Saurolophus - Cuba 1987; Mongolia 1967; Russia 1990.
Sauropodomorph footprints - Lesotho 1984.
Scolosaurus - Laos 1988.
Sordes - Russia 1990.
Stegosaurus - Benin 1985; Congo Republic 1975; Central African Republic 1988; Dahomey 1974; Fujeira 1972; Guinea 1987; Hungary 1990; Malagasy 1988; Maldive Isls 1972; Poland 1965; St Thomas & Prince Isls 1982; San Marino 1965; Tanzania 1987; USA 1970, 1990; Vietnam 1979; Great Britain 1991.
Styracosaurus - Poland 1965; Vietnam 1984; Cuba 1987.
Talarurus - Mongolia 1967.
Tarbosaurus - Hungary 1990; Mongolia 1967.
Tarbosaurus bataar - Kampuchea 1986.
Trachodon - Laos 1986.
Triceratops - Central African Republic 1988; Cuba 1987; Fujeira 1972; Malagasy 1988; Maldive Isls 1972; Mali 1984; San Marino 1965; St Thomas & Prince Isl 1982; Vietnam 1979; Nicaragua 1987; Great Britain 1991.
Tylosaurus - Guinea 1987; Nicaragua 1987.

Dimorphodon

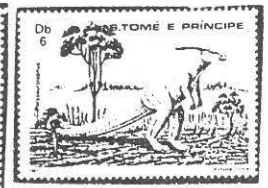


Dicraeosaurus

Plateosauravus

Stegosaurus

Iguanodontus



Parasaurolophus

Tyrannosaurus - Congo Republic 1975; Cuba 1984; Central African Republic 1988; Dahomey 1974; Malagasy 1988; Maldive Isls 1972; San Marino 1975; Poland 1965; USA 1990; Vietnam 1979; Great Britain 1991.
Tyrannosaurus rex - St Thomas & Prince Isl 1982.
Zambiasaurus - Zambia 1973.

Triceratops

Tarbosaurus

Tyrannosaurus

Some countries have not named the reptiles on their stamps, as follows:-

- Archaeosaur, probably a saurischian - China 1958; Kuwait 1982 (2 stamps).
- Stem-reptile from 230 mya - British Antarctic Territory 1982.
- Probably a Euryapsid, and one of the swimming dinosaurs with paddle-like limbs - Japan 1977.
- Mammal-like reptile and carnivorous dinosaur - Cuba 1987.
- Carnivorous dinosaur - West Germany (Berlin) 1977 (4 stamps).
- Carnivorous dinosaur & sauropods - Mongolia 1990 (Miniature sheet).

The archosaur line leading to modern crocodilians is represented by a skull of Sarcosuchus imperator (Niger 1977), late Cretaceous crocodile with a head 2 m long and body estimated at about 11 m long!

The line leading to modern snakes is represented by a relatively recent fossil snake Pachyophis woodwardii (Yugoslavia 1985).

Postscript

My first article (African Herp News 15) contained a few errors - the last list (giving recognisable herps depicted on stamps to 1950) is altered as follows:-

"Cayman Islands	1935	Geochelone elephantopus
		Varanus komodoensis"

is deleted, and in its place is inserted:

"New Zealand	1935	Sphenodon punctatus
Cayman Islands	1935	Eretmochelys imbricata
Ecuador	1936	Conolophus subcristatus
		Geochelone elephantopus
New Zealand	1936	Sphenodon punctatus".

Mr Piotr Sura (Poland) wrote to me after reading the first article and informed me that the first terrapins on stamps, (Ryuku 1965) originally called Cuoria flavomarginata, are regarded as a new species now called C. evelynae.

INSTITUTIONAL NEWS

CHIEF DIRECTORATE: NATURE & ENVIRONMENTAL CONSERVATION, TRANSVAAL

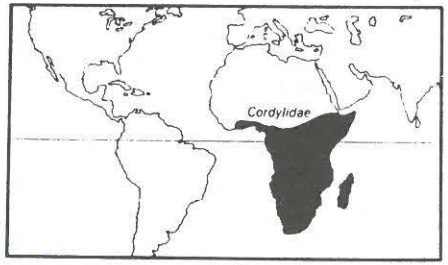
Current work involves filling in gaps in our knowledge of Transvaal herpetofauna, with emphasis on flat geckos of the genus *Afroedura* and the girdled lizard *Cordylus warreni*, particularly in the north-eastern corner of the province.

A recent field trip to the Punda Milia - Pafuri region of the Kruger National park was successful in obtaining specimens of both groups. This should enable us to determine the number of species of *Afroedura* found in this area. Cursory observations indicate that all specimens are referable to a single species, found along the Soutpansberg and in the country to the north, but still allopatric to *A.t. transvaalica.*

Another problem in this area is the position of the girdled lizards belonging to the *Cordylus warreni* complex, found along the Madziringwe stream, a tributary of the Levuvhu river. We were successful in finding this lizard over a broader front and specimens were collected from several localities. Their colour pattern is reminiscent of true *C. w. warreni* from the Lebombo range. It would therefore appear that they represent a relict population which may be intermediate between *warreni* and *depressus.* An interesting aspect is that these lizards, like *depressus*, are smaller and less colorful as one proceeds from north to south, that is from a drier to a moisture climate. It now remains to establish how close these specimens are to *depressus* and to *warreni* in order to establish the validity of both races.

Richard Newbery is also assisting part-time and is involving himself in the formulation of a management plan for the small *Cordylus giganteus* reserve established by Escom at the site of the Majuba Power Station. A recent survey indicated the presence of 150 inhabited burrows. As several animals still have to be removed from the proposed ashing area, these will be relocated to this nature reserve which is now apr. 300 ha in extent. These animals will be monitored over a period of at least two years in order to determine the success of the operation.

Submitted by: Niels Jacobsen, Specialist Scientist, Chief Directorate: Nature & Environmental Conservation, P.O. Box 16120, Pretoria North, 0116 South Africa.



PORT ELIZABETH MUSEUM AND SNAKE PARK

Department of Herpetology

As from the 1st of June 1991, Gerald joined the Port Elizabeth Museum as a curator at the snake park. However, he will also assist Dr Bill Branch in the curation of the herpetological wet collection. With the assistance of Graham Alexander of the University of the Witwatersrand, we have started upgrading the database of the wet collection, as well as initiating a herpetological bibliography. This is an ideal opportunity to check the collection, check identifications and re-do the labelling system.

During July 1991, Gerald undertook a herpetological collecting trip to Zambia. This resulted in 512 specimens being accessioned into the wet collection. The 'results' of the field trip will be published soon. Interesting material collected includes *Eumecia anchietae, Dipsadoboa shrevei, Mabuya ivensii* and *Bufo fuliginatus.*

The Department of Herpetology is currently involved in several projects. These include:

- The completion of the proceedings of the second herpetological symposium held in Bloemfontein - due out early 1992.
- An environmental impact survey at Mondi forest sites in the north-eastern Cape Province.
- Final description of '*Homopus bergeri*'.
- Continuation of the investigation on the small *Bitis* of the Cape Province, with revisions of the *conuta* and *atropos* complexes.
- Herpetofaunal survey of the Little Karoo with Prof. A. Bauer (Villanova University).
- Analysing a recent collection of Zambian herpetofauna, and publication of distribution and other data.
- Organizing the Scientific Advisory Committee for the IUCN Declining Amphibian Population Task Force (DAP). (see this newsletter for more information on DAP).

Snake Park

Since Gerald's appointment, we have had the opportunity to re-evaluate our priorities and long-term goals for the park. We have started renovations to the outdoor enclosures. This included the upgrading of the *Varanus niloticus* enclosure and moving them to the old demonstration pit. The park is in the process of undergoing a general face-lift, with a positive move to assist Bill's research, such as the reproductive biology of the small adders from the Karoo, behaviour patterns in the dwarf chameleons, behaviour patterns in the dwarf chameleon genus *Bradypodion*, etc.

We recently subscribed to the International Species Information System (ISIS). Chris is currently transferring records for the live animal collection onto the Animal Record Keeping System (ARKS). This will ultimately include the fish and marine mammals held in the Oceanarium as well. We have also obtained the associated MEDARKS and Singe Population Animal Record Keeping System (SPARKS) computer programmes, and all records will ultimately be computed using this software.

We have also recently acquired a TROVAN scanner and transponders for use in marking the live animals in the collection. This will form an integral part of the record keeping system, as ARKS makes provision for transponder numbers and associated data.

In June, Chris attended the Pan African Association of Zoological Parks, Aquaria and Botanic Gardens (PAAZAB) conference held in Outshoorn. PAAZAB initiated an African Preservation Program (APP) along the lines of the Species Survival Plan in the United States. Together with Gerald and Bill, he will be responsible for co-ordinating breeding programmes for African herpetofauna. In this regard, the SPARKS software will be particularly useful.

Publications in press:

Bates, M.F., Haagner, G.V. & Flemming, A.F. Evidence of asynchronous breeding in the variable skink, *Mabuya varia* (Peters, 1867) in South Africa. *Herp. review.*

Bauer, A.M., Branch, W.R. & Haacke, W.D. The herpetofauna of Kamanjab and adjacent Damaraland, Namibia. *Madoqua.*

Branch, W.R. The Regina Registers of 'Gogga' Brown (1869-1909). "Memoranda on a species of Monitor or Varan". Early observations on the rock monitor, *Varanus albigularis*, supplemented with additional notes on the biology of southern African monitors. *Proceedings of the Varanid Conference*, Bonn, 1989.

Branch, W.R. A new book entitled *"Everyone's guide to Snakes of southern Africa"* (also includes lizards, tortoises and amphibians) is soon to be released by CNA, 112 pp.

Cooper, M. & Branch, W.R. subfossil tortoise from the Brandberg, Namibia. In: Der Brandberg (Investigations into the settlement history of a high mountain in Namibia). P. Breunig, *Africa Praehistorica*.

Haagner, G.V. The Natal hinged tortoise, *Kinixys natalensis,* a new tortoise record from the Kruger National Park. *Koedoe.*

Haagner, G.V. Keratophagous behaviour in two southern African snakes. *The Naturalist.*

Haagner, G.V. Notes on the captive breeding of green mambas. *Herp. Assoc. Zimb. Newsl.*

Haagner, G.V. & Carpenter, G. Notes on the captive breeding of the black spitting cobra, *Naja nigricollis woodi* (Serpentes: Elapidae). *J. Herp. Assoc. Afr.* **41**.

Haagner, G.V. & Morgan, D.R. The captive propagation of the Cape Cobra, *Naja nivea* at the Manyeleti Reptile Centre. Proc. 2nd Herp. Assoc. Africa Herpetological Symposium *J. Herp. Assoc. Afr.* **40**.

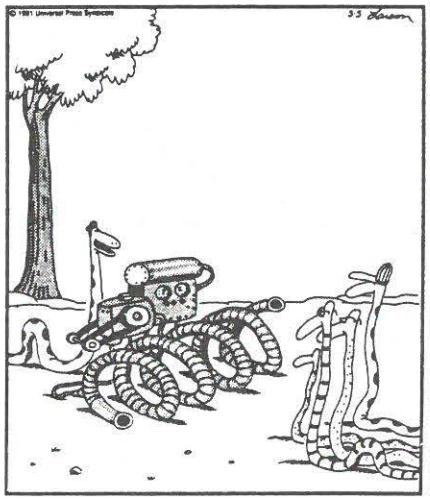
Haagner, G.V. & Morgan, D.R. Aspects of the captive biology of the intermediate shield-nose snake, *Aspidelaps scutatus intermedius.* Proc. 2nd Herp. Assoc. Africa Herpetological Symposium *J. Herp. Assoc. Afr.* **40**.

Haagner, G.V. & Morgan, D.R. Notes on the captive propagation of the rough-scaled plated lizard, *Gerrhosaurus major.* Proc. 2nd Herp. Assoc. Africa Herpetological Symposium *J. Herp. Assoc. Afr.* **40**.

Haagner, G.V. & Reynolds, D.S. Preliminary observations on the use of Zoletil for the immobilization of captive Nile crocodiles, *Crocodylus niloticus* (Lauranti). *J. Herp. Assoc. Africa*.

Morgan, D.R. & Haagner, G.V. Aspects of the captive biology of the lowland viper, *Atheris superciliaris. Inter. Zoo Yrbk.*

Submitted by: Gerald Haagner, Bill Branch and Chris McCartney, Port Elizabeth Museum, P.O. Box 13147, Humewood, 6013 South Africa.



"You just take your victim, slip 'em into the flex-o-tube, flip the switch, and the Mr. Coils o'Death takes over."

"Oh, man! You must be looking for 'Apartment 3-G,' 'Mary Worth' or one of those other 'serious' cartoons."

SECOND HERPETOLOGICAL REPORT FROM THE TULI CIRCLE (15 TO 24 NOVEMBER 1990)

G.S.A. Rasmussen

East Trethellan, Trethellan Water, Lanner, Redruth, Cornwall, England

INTRODUCTION

Following a full expedition to the Tuli Circle in April 1990, when *Lygodactylus bradfieldi* and *Lygodactylus capensis* were found to occur parapatrically (Rasmussen, 1991), it was decided in May to initiate a full and on-going study to determine the ecological niches utilized and method of species co-habitation in the area.

In May 1990, two weeks were spent scouring the riparian strip of the Shashi to confirm the suspicion that *L. capensis* was indeed confined to the latter habitat and furthermore to determine in more detail the habitat type and requirements of *L. bradfieldi*. It was also hoped that additional species would be added to the check list for the area. However, as winter was setting in, nearly all the reptiles seemed to have vanished, other than those studied and a series was collected of both geckos.

It was thus not until November 1990 when another trip was made to the area, with the hope that rain would bring out more species and also to see if there was any seasonal variation in population densities or habitat utilization. Collecting was kept to a minimum, with only sampling populations of *L. bradfieldi* being taken and voucher specimens where new locality records were concerned. Otherwise, only field notes were taken when considered appropriate.

RESULTS

Systematic discussion

SAURIA

Gekkonidae

Lygodactylus bradfieldi/Kalahari dwarf gecko
A very common species throughout the study area and without doubt very successful throughout the niche. It will be discussed in further detail in a later report.

Pachydactylus punctatus/Spotted thick-toed gecko
Further to it being ubiquitous in April, it was surprisingly absent and only one specimen was to be found under a stone.

Agamidae

Agama aculeata armata/Eastern tropical spiny agama
A species which somehow remains surprisingly elusive in this area, although the habitat appears prime. The only specimen collected was caught on rocky substrate, feeding on alates during a rainstorm. Their microhabitat still remains a mystery in this area.

Cordylidae

Gerrhosaurus nigrolineatus/Black-lined plated lizard
Only to be found in areas where there was grass cover. The yellow dorso-lateral stripes were exceedingly well defined on both the specimen collected and those sighted. The same high degree of definition was also to be found on both *Psammophis s. subtaeniatus*, and *Mabuya striata striata*, thus indicating a reliance on the strength of the striped markings to break up their outline as an anti-predator mechanism.

SERPENTES

Viviperidae

Bitis caudalis/Horned adder

They were all found coiled up on the stony substrate immediately after a rain shower, presumably coming out to drink. They all attempted to rely initially on their camouflage to escape detection. This they would achieve by flattening themselves to the substrate and remaining motionless. Once it became apparent that they had been detected, the defence was reversed with full inflation of the body, violent hissing and rapid side-winding to the nearest bush. One of the males, however, was in extremely poor condition, obviously having gone into hibernation with very little adipose tissue. This is rather interesting, for it conforms with another male caught in April, also lacking fat, both snakes in fact dying. This leads one to a point of conjecture that combat is probably fierce and prolongued during April/May, during which period the females will continue feeding, whereas the males will cease, and thus probably explains the poorer condition of the males, as has been the case. This situation is, furthermore, possibly a species survival technique, in that this species occurs in more arid areas where food sources are limited. Competition for food will thus, without doubt, be high, favouring the females for two reasons and thus allowing them to attain breeding condition:

) Due to the period of sexual activity when combat is occuring, the males will not be feeding, and thus not depleting the limited food resources. This will thus mean not only greater food availability, but an extended feeding season for females in contrast to that of the males.

) As a direct result of combat activity and a shortened feeding season, male mortality will be proportionally higher, with a large number not surviving hibernation. This will thus be a benefit to the species in terms of males (which are expendable anyway), not depleting the food source. This latter fact is

particularly salient when one considers that shortly after hibernation the young are produced, coinciding with an increase in food supply following the rains. Thus not only would a reduction in male population be an advantage, but it could well be a necessity (Akester, 1982).

DIARY

THURSDAY 15th November
Up at 03h00, awaiting my lift to the Tuli circle. However, as is usual, the best laid plans always seem to have a habit of going awry. One person, was missing and we didn't get away until 07h00! Nevertheless, we did at least get there at 11h00 and went to one of the windmills providing water for the game. It was dry and the gang was dropped off armed with picks and shovels to deepen the well. The ground was still bone dry and with it being overcast, all my fossicking around produced nothing. Later we moved on to No. 2 windmill where other repairs had to be accomplished and the sun briefly showed through the cloud. Within minutes I had secured my first specimen, a *Lygodactylus bradfieldi* (Kalahari dwarf gecko). We then returned to the National Parks base via the last windmill at the extremity of the circle. This area, I decided, needed to be worked at all costs. This I achieved a week later and my feet certainly paid for the pleasure of it. We arrived at the base late as a result of the headlights rattling loose and thus shining only a few feet ahead, and hence progress was slow. I was dropped at base, my lift continuing back to Bulawayo. Having neither time nor inclination to put up my tent, I unrolled my bag under a tree and slept until woken by rain at 04h00. Fortunately it wasn't too hard, and I only got wet, not soaked!

FRIDAY 16th November
Had breakfast with the warden and discussed my plans to enter the Circle and camp there in order to get a better look at the area. Finally it was decided that I should go with an anti-poaching patrol and we could kill two birds with one stone, so to speak. We finally got away at 11h00 and myself, field gear and 3 scouts (Obert, Alfred and Sunny Boy) were dropped at the south end of the circle at Sinongwe Spring. Our first priority was food, so no sooner than we had unpacked, we split up into two groups in search of an impala. Unfortunately the wind was not in our favour and we tracked a herd of impala hard for two hours but couldn't get close. Murphy's Law prevailed and just as we were managing to get close, a large *Psammophis subtaeniatus* (Stripe-bellied sand-snake) glided right by my foot. I decided that my stomach in this instance had priority over herpetology and lest I made a noise, remained motionless as it glided away. As it turned out I could have caught it, as we returned to camp empty-handed. Fortunately Obert and Sunny Boy had better luck. We prepared the meat, having left an offering for the predators a kilometre from camp.

SATURDAY 17th November
Up early and set off in good spirit eastwards. Unfortunately, not only was it cold, but totally overcast, and apart from a *Pachydactylus punctatus* (Thick-toed gecko) and a *Mabuya varia,* no *Lygodactylus bradfieldi* were found. Three more hours of fossicking produced nothing until the sun came out and one was sighted. Fortunately for him he saw us in time to disappear into what turned out to be an impenetrable hide - a mopani

stump which my axe refused to cope with. As it didn't look promising for "herps", I spent the afternoon setting up a hide from which to watch game and managed to select an excellent spot only 25 metres away from the water. I thus played "Judas" to herpetology and spent the rest of the day photographing wildebeest, kudu, impala and saddlebilled storks. Spent the night in the hide and identified 5 different frog calls but I had left my torch at the base camp and had to be content simply listening.

SUNDAY 18th November
Went on a reconaissance trip to three springs and one pan, searching for another area to set up another base around which to work. Unfortunately, all points except Sitakeni were dry, and we thus stayed at Sinongwe. The heat was now building up and no reptiles were seen other than another *Lygodactylus bradfieldi*. Being too hot and humid, I returned to my hide, only to find all the game worrying about something on the other side of the spring, away from my hide, and none would come to drink. I suspected a predator lurking. Following the night before's series of frog calls, I proceeded to try to find representatives of the five species that had called, and managed to procure four, namely *Bufo garmani, Tomopterna marmorata, Ptychadena anchietae and Phrynobatrachus natalensis* (Garman's toad, Marmorate pyxie frog, Plain grass frog and Natal puddle frog respectively). The fifth caller eluded me, and a good hour was spent searching to no avail.

MONDAY 19th November
Woke up at 05h00 to find kudu, impala, zebra, wildebeest and impala all competing heavily for a drink. Probably a wise decision on their behalf, as it turned out to be the hottest day so far. The predators too were busy, with the lions roaring to the east and leopard calling to the west. We left camp at 07h00 and had an excellent morning collecting *Lygodactylus bradfieldi*. There was no cloud cover and we persevered, collecting and observing until 12h00, stopping only to raid a mopani bees' nest. The latter I might add, certainly not proving energy efficient, for we expended a lot of effort for no more than a thimble full of honey. Still, it tasted good. The rest of the day was spent melting, whilst at the same time desperately seeking shade. In the evening, Obert accompanied me in search of the fifth frog, and we found it - *Phrynobatrachus mababiensis* (Mababe puddle frog).

TUESDAY 20th November
Scouts went on an early morning border patrol and returned with a suspect subsistance poacher who was totally calm until he sighted me with a syring in hand preparing to inject the previous night's frogs with alcohol. His eyes widened and he attempted to break, only to be recaptured, protesting profusely that he was under no circumstances going to have an injection. No collecting was done this day, for we were waiting for a pick-up from Parks and for our suspect to be taken to Parks HQ in Tuli. Unbeknown to us, the vehicle had had a puncture, and we waited in a stupour in the exceptional heat.

WEDNESDAY 21st November
Woke early hoping for the possibility of photographing the elephants which had so far eluded me, only to find that they had done their drinking early in the morning around 02h00! Went in search of another water supply, and did a round trip to Sezi spring and Lide pool, where although there was water, there was also a resident crocodile basking.

Upon seeing us he quickly vanished, and upon arriving at the pool, we found three impala in various states of decay. The latter scuppering any chances of a new campsite with fresh water. Fortunately, National Parks collected us later and dropped us at no. 3 windmill, where there was a plentiful supply of fresh water.

THURSDAY 22nd November
Woke up very early to the sound of lions in all directions, and upon going to get the morning's water, found very fresh spoor all around the water hole. The habitat was generally different, with good grass cover, and the tree savanna more closed, so I set off early with high hopes. I was contentedly collecting *Lygodactylus bradfieldi* when we walked into a lioness, apr. 30 metres away, resting under a Shepherd's tree. Fortunately she decided that either we didn't look tasty enough for the days menu, or we were simply not a threat and she calmly trotted into the long grass and started calling. When we got to the place she had lain, we found a second spoor of a large male somewhere close. Whilst it was a pleasure seeing the lioness, we were pleased not to encounter the male. Whilst this grassy area had its disadvantage, in that it housed lion, I shortly thereafter sighted a *Gerrhosaurus nigrolineatus*, which was dispatched with dust shot, as it was a new locality record. The afternoon was taken off on account of the heat, and the storm clouds were building up. I waited expectantly for rain. Unfortunately the clouds dispersed at the last minute and we had only a small shower. Feeling thoroughly cheated, we turned in.

FRIDAY 23nd November
The day started hot and cloud free and we collected our first *Lygodactylus bradfieldi* at 07h00 whilst on our way to Ntangamachena Spring. Others were sighted and collected until the clouds came over once more and then dissappeared. We were, however, kept busy, for Sunny Boy was full of his usual enthusiasm, and was procuring more Mopani bee honey. He then started us all off water divining with a mopani sapling. The spring contained only a few drops of water and as we waited, it filled up to a bucketfull over a period of half-an-hour. A herd of impala and zebra were waiting at a safe distance, waiting for us to move so they could drink, so we left and returned to our base. In the afternoon, we all melted once more as it built up to rain. This time it was for real and at 15h00 it started raining. We had a good shower and heavy rains were in sight everywhere else. As soon as the rain stopped, I hopefully went out collecting, but to no avail. The lions, however, were contented and could be heard all around, as could the Ground hornbills and a host of birds I had not previously heard. I was optimistic. My optimism was founded half- an-hour later when the heavens opened and we had a downpour lasting an hour. As soon as it stopped, I decided that lions or no lions, herpetology was coming first and I was going collecting. Little did I know that I was about to come very close to receiving a potentially serious bite.

As I was preparing to go out collecting, armed with snake stick and torch, I heard what sounded like rushing water. Immediately, thinking that perhaps the river was coming down in a flash flood, I headed at full speed towards the river bed with my mind temporarily off "herps". Fortunately, my eyes were as usual looking no further than a few metres ahead, and whilst running, I spotted a Puff adder in my path, no more than one pace away. His head was well back in a striking coil! Somehow I managed to stop my momentum, and instead of getting bitten, caught a large male puff adder. The only

trouble with being a herpetologist is that nobody would ever believe that it was an accidental bite! As for the sound of running water, it transpired to be only a strong gust of wind! Spurred on by the knowledge that "herps" had at last come out, I took a now rather reluctant scout with me and went collecting. I was well rewarded, collecting two *Breviceps adspersus* (Peters rain frog), and then spotted a "nondescript" black snake. This I pinned down in order to get a better look and to confirm my suspected identification. When sure of the latter, I dispatched it. It was of course the infamous Stiletto snake, *Atractaspis bibronii*, and as I had received my first and last bite by a venomous snake of this species some 23 years ago, I didn't want another. Further collecting produced one *Phrynomerus bifasciatus* (Red-banded rubber frog) and a male *Bitis caudalis* (Horned adder). At this point my torch failed and we headed for camp, my scout even less impressed. Lions calling close was one thing but when one is suddenly made aware of how many snakes are about, that is another.

SATURDAY 24th November

It had rained all night and was still raining when we awoke at 05h00. We were due back at the National Parks camp today. However, it soon became apparent that there was no way our lift was going to attempt to cross the Shashi. Even if the vehicle did manage to cross, it would not be able to return. We therefore packed and went fossicking until 10h00, capturing two more *Bitis caudalis*. We then set off to hike the 30 km back, with rucksacks brimming. For safety sake, I had the Puff adder in two bags in a saucepan with the lid on. I had visions of feeling a pricking sensation in the neck at some stage of the hike! Halfway through we caught an *Agama aculeata armata* (Eastern tropical spiny agama) feeding greedily on alates. After the first few hours, my pack started to get heavier (as it had filled up with water), and I began to have regrets about all the biltong I was taking back, as well as the heavy camera gear. We made it to the Shashi in five hours. Already it was halfway across and begining to flow with pace. Two hours later it was flowing too fast to cross. My lift arrived shortly after our return, and after a beer and a good night's sleep, all was back to normal.

ACKNOWLEDGEMENTS

First and foremost I would like to thank the warden, Mr Mpungu, my scouts and other staff at National Parks, Tuli, who have been exceedingly helpful and who have made my forays into the Cirle both safe and possible. I also thank Harry Erwee for organizing transport for me to reach the study area. Finally, I thank Dr D.G. Broadley for encouragement, assistance and helpful comments throughout.

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UNUSUAL HERPETOLOGICAL OBSERVATIONS IN THE KRUGER NATIONAL PARK

W.R. Branch

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In scientific circles, natural history has become something of a dirty word, and simple biological observations are dismissed as insignificant. Whilst I do not doubt the validity and desirability of the modern research approach, based as it is on the formulation and testing of hypotheses, I want to plead for the continued, even increased, reporting of anecdotal observations. Ecological models and theories are increasingly based on a few well-studied species. Detailed knowledge of the biology of these may be of little use to herpetologists charged with the conservation and/or husbandry of rare and unusual species. For them the published anecdote is often the only information available on an endangered species' biology. Somewhere a data base of anecdotal observations has to accumulate, and there is a dire need for suitable outlets. In simple terms, I'm pleading for herpetologists, rangers, conservators, and naturalists to put pen to paper and to publish their observations. The Notes sections (Life History, Geographical Distribution and Venoms/Snakebite) of the HAA Journal are designed to specifically serve this need.

Interesting and unusual observations on the biology of reptiles and amphibians are occasionally listed in the annual reports (AR) of the National Parks Board, Pretoria. I have abstracted a number of the more unusual of these reports from various national parks, and publish them here simply to draw them to the attention of herpetologists and to stimulate the reporting of anecdotal observations.

The *42nd AR* (1967-8, p. 45) records a 3.1 m python (Python sebae) laying eggs in an antbear hole, and a group of six terrapins (Pelusios sinuatus) feeding on a dead hornbill at a waterhole at Makhadze Stream.

The *47th AR* (1972-3, p. 17) notes that at Punda Milia a 2.4 m Egyptian cobra (Naja haje annulifera) was killed in the process of eating a 1.6 m python.

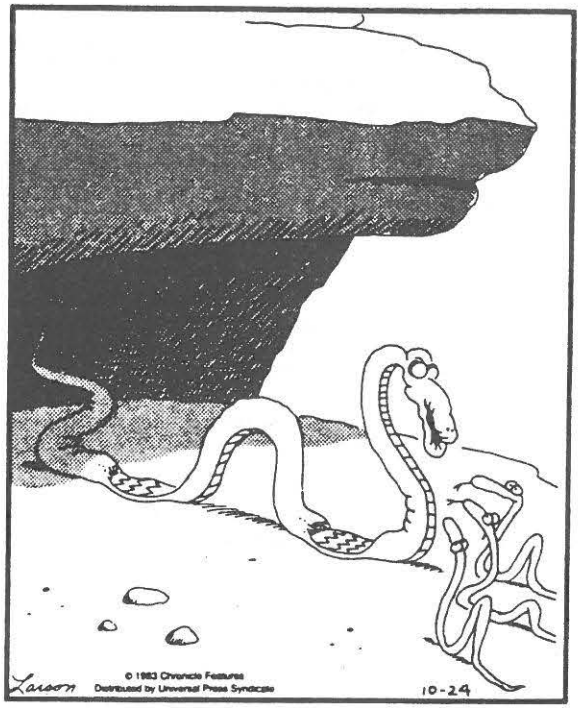
The *52nd AR* (1977-8) records a python that killed a duiker lamb, and a massive python of 6.1 m that was also observed. A large (3 m) Egyptian cobra was reported in the 51st AR (1976-7).

The *57th AR* (1982-3, p. 11) notes a number of records of predation by, and on pythons. A 4.5 m specimen killed a grysbok, and in turn was killed by hyaenas; at Hulukulu Pan a 3.5 m specimen killed a ratel (*Mellivora capensis*), and a 3 m python was observed trying to catch barbel (*Clarias gariepensis*) in a waterhole at Red Rocks.

The *59th (AR)* of the National Parks Board (1984-1985, pp. 9-10) records an observation of a 2 m black mamba (*Dendroaspis polylepis*) catching and eating flying

termites as they emerged from their holes at Mahlangene in the Kruger National Park. Another black mamba (2.3 m) swallowed a squirrel (species not specified, but probably the tree squirrel (*Paraxerus cepapi*), and a caracal (*Felis caracal*) killed a 3.5 m python. A large Egyptian cobra from Houtboschrand measured 2.5 m and weighed 3.2 kg.

A report of a leguaan (species not specified) observed to catch an adult mongoose (again species not specified) is noted in the *61st AR* (1986-7, p. 12), and a water leguaan (*Varanus niloticus*) was noted to stay underwater for 9 minutes in the *62nd AR* (1987-8, p. 11). The recent *64th AR* (1989-90, p. 12) contains a reported observation of crocodiles (*Crocodylus niloticus*) robbing lions of an impala kill, and of other crocodiles feeding on a dead crocodile.



"Again? Oh, all right . . . One warm, summer evening many years ago, I was basking on a stretch of Interstate 95 not far from here . . ."

THE UNSUCCESSFUL TREATMENT OF DYSTOCIA IN A CAPTIVE BROWN HOUSE SNAKE, *LAMPROPHIS FULIGINOSUS*

G.V. Haagner

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Dystocia is fairly well known amongst captive reptiles. It has been suggested that it is a product of the captive environment. The use of smooth muscle stimulant to induce labour or relieve dystocia has been reported (Huff, 1976; Holt, 1981). There appears to be some doubt as to its efficacy, and it is not widely used amongst South African herpetoculturists.

The Manyeleti Reptile Centre housed 12 adult brown house snakes which were sporadically used in educational talks. The largest female produced viable eggs in two consecutive years. During November 1989, she was obviously gravid again, and a nest box with damp vermiculite was provided. By 12 December 1989, she had still not passed any eggs and appeared to be in discomfort, with large bulges posteriorly. From the symptoms, it was decided that she was suffering from dystocia, and treatment was started. Successful induction of labour with the use as a muscle stimulant, Oxytocin*, has been reported in *Elaphe obsoleta rossalleni*, with a dosage of 10 i.u./kg (Peters & Coote, 1977). Morgan (1988) reported on the successful use of Oxytocin in *Python regius* at a dosage of 6 i.u./kg. It was therefore decided that 6 i.u./kg would be a relatively safe dosage to use on the house snake, despite it being considerably smaller than the *P. regius*.

The female measured 985 mm and weighed 215 g. At 10 i.u. per millilitre Oxytocin, a total of 0,12 ml was mixed with 0,2 ml sterile water and injected intra-muscularly. The female was immersed in a warm bath as recommended by Morgan (1980). Holt (1981) reports that it is probable that the utrine mucosa must be moist for Oxytocin to be effective. Morgan (1988) therefore reported the initial administration of 5 ml Ringer's lactate i.p. four hours before the administration of Oxytocin to a Mangrove snake (*Boiga dendrophilla*). However this was not done in the case of the house snake due to the lack of Ringer's lactate or a suitable substitute.

The next morning the female was found dead in the warm bath. She was unable to pass the eggs. Post-mortem revealed 8 hard elongate eggs in the oviducts. These measured 57 x 32 mm and had a granular appearance. It is possible that stress played a major role in this case of dystocia. The efficiency of the administration of Ringer's lactate to moisten the uterine mucosa is open to interpretation. Holt (1981) postulated that the concurrent adminstration of calcium would further enhance the efficacy of the hormone. Morgan (1988) stated that "it should be remembered that biologically active hormones require specialized environments in which to function. The absence of the necessary environment allowing for hormonal receptor sites simply means that the hormone will not work". More studies on the use of Oxytocin in the treatment of dystocia are required.

*Oxytocin - Leo Laboratories Ltd, Veterinary Division, Prices, Risborough, Bucks.

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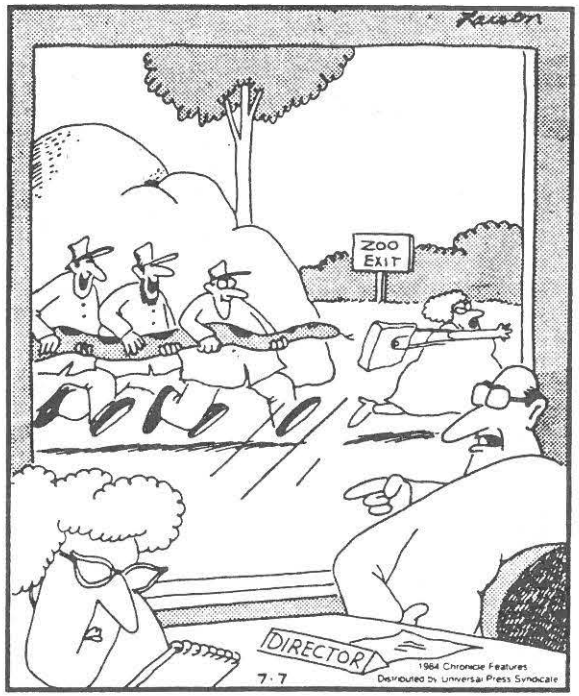

**"Take another memo, Miss Wilkens . . .
I want to see all reptile personnel in my office
first thing tomorrow morning!"**

SOME INTERESTING IDEAS ON SNAKE BITE MANAGEMENT IN INDIA

R.M. Douglas

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While browsing through the second issue of *Cobra*, the quarterly newsletter of the Madras Snake Park Trust, I came across some interesting points on snake bite in an article entitled *Management of snake bite with special stress in deserts,* by Dr. B.S. Chouhan. The ideas were interesting in that they are not usually considered in snake bite management, and clearly illustrate that each man has his own problems.

Snake bite in India is a very real problem. Dr. Chouhan estimates that 20 000 deaths occur there every year through snake bite. He also mentions that populations of poisonous snakes, and thus incidences of snake bite, are particularly high in desert regions, a fact which may be contrary to what many people believe.

Under the heading *Management of snake bite*, it is interesting to note that the application of a tourniquet is given high priority as a general measure, although the immobilization method is also mentioned. Dr. Chouhan states: "If there is history of reaction to antivenom but there is danger to life, antivenom treatment can be given preceded by the pre-treatment with adrenalin, antihistamine, cortisteroid (Rapid desensitization is not recommended)". Of course this may be a matter of opinion, as may be Dr Chouhan's idea that lights keep snakes away.

Although no details are given, the mention of the use of prophylactic immunization against snake venoms to immunize high risk Japanese farmers is of interest.

Dr Chouhan mentions that epidemics of snake bite occur as a result of sudden population explosions resulting from flash floods, and the invasion of natural habitats by man for developmental purposes. Another reason given for epidemics of snake bite is that during floods, man, beast and snake have little alternative but to head for the same few remaining areas of high ground - which can become somewhat congested.

A secondary problem associated with snake bite in deserts is that due to the lack of agriculture and the high incidence of drought, there is a severe vitamin "C" deficiency amongst the population. This results in profuse bleeding and haemoraging in victims, and vitamin "C" treatment is therefore highly recommended. Also due to diet, low resistance and protein energy malnutrition may result retardation of wound healing. Because of the hot desert environment, capillary oozing will continue and the chances of hyper-pyrexia will also increase. Mention is made of the special care that should be taken against infection in this environment, particularly as the chances of infection will increase dramatically due to sand storms.

The documented report in the same issue of *Cobra*, dealing with the superstition of what will befall one if a lizard should fall on one's head, is somewhat contrary to the above. A lizard falling and landing on the left side of the head can cause a loss of money, a lizard falling on the right side of the head can cause a gain in money, but a lizard landing in the center of the head can mean only one thing - death. The described and applied cure for the latter problem was that the patient was wrapped in a purple (no other colour) bedsheet and left supine for two days with neem and betal leaves strewn around the bed. Needless to say, the patient survived his impending death from the lizards fall as well as what appears to be the even more traumatic two days of bondage.

RELATIONSHIPS BETWEEN FANG LENGTH AND THE TOXIC/DIGESTIVE PROPERTIES IN FRONT-FANGED SNAKES

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The Viperidae in southern Africa, as is typical of the family, have extremely long venom fangs. The mechanical action of these formidable "needles" would, more often than not, result in massive internal damage when thrust into the prey item, resulting or closely followed by death, due to fatal organ damage.

This ability to stab the prey to death leaves more scope for the development of digestive enzymes in the venom itself, i.e. the evolution of advanced digestive enzymes to aid in digestion, at the expense of underdeveloped toxicity, because the subduing and killing of the prey is carried out by the mechanical action of the bite. This results in a highly developed and effective combination in both immobilising and digesting of prey items. Very large quantities of venom in relation to individual size could also be seen as a resulting development with the intention that a much larger dose of venom would cause toxic shock, again making up for the lack of toxicity, and consequently speeding up the digestive action even further.

The Elapidae family, on the other hand, have developed highly toxic and immediately effective "immobilising qualities" to the venom. This could be interpreted that the initial immobilisation of the prey is more paramount in feeding than is digestion. The function of digestion is thus left up to the internal digestive juices, which could arguably be stronger than those of the Viperidae, i.e. the lack of fang length development has depressed the progressive development of digestive enzymes in the venom to allow for more advanced development in toxicity, so that the lack of mechanical killing power can be covered by the injection of a potent and immediately-acting toxin. This can perhaps be seen as motivation that the Viperidae have in fact developed a more advanced venom apparatus than is popularly believed.

RECENT AND CURRENT HERPETOFAUNAL SURVEYS IN SOUTH AFRICA, LESOTHO AND SWAZILAND

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During the last 10-15 years or so, a number of important herpetofaunal surveys have been conducted in South Africa, and have added enormously to our knowledge of distribution patterns. Other surveys are currently in progress. Recent new distribution records indicate that many species occur over a far wider area than previously recorded. For example, updated distribution maps now show that the ubiquitous Common clawed frog (*Xenopus l. laevis*) has a widespread occurrence in the Orange Free State (De Waal, 1970a; Bates, *in press*.), a region in which it was not previously recorded (Poynton, 1964). Another particularly interesting example is the distribution of the Common long-tailed seps (*Tetradactylus tetradactylus*), previously known from the south-western Cape Province and one record at Burghersdorp in the north-eastern Cape (FitzSimons, 1943). In 1990, Branch recorded the species at numerous other localities in the Cape, up to several hundred kilometres east of its previously recorded range. There are many more examples.

Important surveys of large areas in South Africa include those for the Kruger National Park, for which the checklists have been updated (amphibians - Pienaar, Passmore & Carruthers, 1976; reptiles - Pienaar, Haacke & Jacobsen, 1983), Cape Province and other parts of South Africa (chelonians - Greig & Burdett, 1976), Orange Free State (squamates - De Waal, 1978; chelonians - De Waal 1980a; amphibians - De Waal, 1980b), Transvaal (amphibians and reptiles - Jacobsen, 1989) and Natal (amphibians - Lambiris, 1989). A number of other smaller surveys have also been conducted, including those for Natal Parks Board reserves (see Bourquin, 1989), and Cape Province nature reserves and other areas (see Branch, 1990).

Currently, the most poorly surveyed area in South Africa is the central and northern Cape Province. However, Branch (1990) recently provided a number of new records for the central and eastern Cape in particular, and Bauer & Branch (see *Institutional News*) are currently surveying the herpetofauna of the Little Karoo. In addition, a herpetological database for the Cape Province is currently being prepared by Baard (1991), and will include all known distribution records for the province.

Until recently, little was known about the herpetofauna of Swaziland. However, a survey of the country's amphibians and reptiles is currently being conducted (see Boycott & Culverwell, *in press*.).

Another country which currently has a poorly-known herpetofauna is the mountainous Kingdom of Lesotho. Very few distribution records from this area have appeared in the

literature. While the herpetofauna of the Natal Drakensberg is fairly well known, and is likely to approximate that of western Lesotho, very few specimens have been recorded, especially from the central parts of the country. However, the Department of Mammalogy at the National Museum is currently conducting a survey of the mammals of Lesotho, and have collected occasional frogs, lizards and snakes from various localities. Virtually all of these specimens represent new distribution records. These include, *inter alia*, records for *Rana vertebralis* (see Bates, 1991), *Cacosternum nanum nanum* (first record for Lesotho), *Pedioplanis burchelli, Tropidosaura essexi, T. cottrelli, Pseudocordylus melanotus subviridis, Psammophis crucifer* and *Psammophylax r. rhombeatus*. Additional records have been obtained from the Natal Museum in Pietermaritzburg and the Transvaal Museum in Pretoria. A provisional and annotated checklist of the herpetofauna of Lesotho is currently being prepared by myself, Angelo Lambiris and Wulf Haacke.

De Waal (1978) conducted an intensive survey of the squamates of the Orange Free State during the years 1972-74. Chelonians and amphibians were also collected, but not as intensively as the squamates (De Waal, 1980a,b). Since 1983 I have been updating De Waal's distribution maps and collecting additional data on reptiles and amphibians from the Orange Free State. This data will be incorporated into an MSc thesis which will also include a biogeographical analysis. Already, six additional lizard and at least three additional frog species can be added to the region's checklist, whilst the ranges of many species are now known to be far larger than recorded by De Waal. A special attempt is currently being made to fill in some of the "gaps" in frog distributions. A number of interesting frog records were recently obtained for the south-western Orange Free State (an area very poorly surveyed by De Waal) as a result of field work conducted by myself and Alex Flemming.

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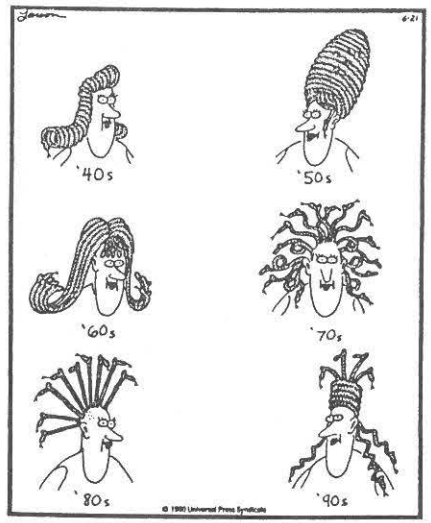
"Got him, Byron! It's something in *the Vespula* genus, all right — and oooooweeeee does he look mad!"



The evolution of Medusa's hair

FROM THE PRESS

NUMBERS UP AS SA CONTEMPLATES CROC HARVEST

The Star, 26 June 1991, page 20

by James Clarke

Crocodile numbers are now building up again, so much so that most experts who gathered at South Africa's first crocodile production symposium at Pretoria University last weekend felt there are enough to withstand careful harvesting.

Winston Churchill once said of crocodiles: "I avow, with whatever regrets may be necessary, to have an active hatred for the brutes and a desire to kill them." The hunter Foran described them as "loathsome and hideous". There are now only 10 500 Nile crocodiles left in South Africa.
Armoured and sinister, the crocodile has been sliding through the waters of Africa for tens of millions of years. With expressionless eye it watched the dinosaurs come and it watched them go.
It is a fast killing machine whose design was one of nature's greatest masterpieces.
Its main diet is barbel.
It has nothing against man.
Indeed it likes people and eats them on occasion.
But man eventually got his own back.
The reptile, which used to be common from the Nile down to the Eastern Cape, was annihilated in most of Africa and disappeared from half its former range in South Africa - the coastal plains and most of the Transvaal.
Today Kruger Park has the biggest population - about 3 500 according to Natal Parks researcher David Blake, who says there are another 1 250 in Ndumu reserve, 1 500 in St Lucia and 1 692 in other Natal reserves.
But crocodile numbers have now been building up again. So much so that most experts who gathered at South Africa's first crocodile production symposium at Pretoria University last weekend felt there are enough to withstand careful harvesting.
In fact next year South Africa will ask CITES - the international convention protecting the world's endangered species - for permission to start exploiting wild crocodiles.
As things stand, South Africa is unique in the world in that it is the only crocodile leather producing country whose production comes entirely from crocodile farms.
Kenya, long ago, got CITES to downlist the crocodile from Appendix 1 (totally protected) to Appendix 2 which allows limited exploitation.
Most of the 150 delegates who attended the Pretoria symposium agreed that the present situation was unsatisfactory.
Even Richard Luxmore, a CITES expert who heads the Wildlife Trade Monitoring Unit at Cambridge, England - part of the World Conservation Monitoring Centre - felt South Africa deserved some latitude.
Delegates said that the biggest threat facing South Africa's crocodiles was not poaching but pollution.

Kruger Park's "crocodile-stiff" Olifants River is becoming more and more threatened by industrial pollutants. They are being plagued by mystifying diseases and there's almost no research being conducted.
South Africa's 40 crocodile farmers are allowed to receive wild crocodile eggs only when conservation authorities dismantle nests whose eggs obviously will not survive.
Because of habitat pressures crocodile are choosing precarious places for their nests. All the same, last year only 13 nests were sold and some years only half a dozen become available.
CITES is so strict that farmers cannot sell or skin crocodiles which emerge from "wild" eggs. They must keep the progeny until they die.
But when the "wild" crocodiles produce young the farmers can slaughter them at 18 to 30 months (when their skins are at their best).
There are about 3 000 adult female crocodiles in captivity on South Africa's 40 farms and they are potentially capable of producing 85 000 hatchlings in 12 months - but they may produce as few as 15 000.
In fact 15 000 happens to be the total number of skins the entire industry has produced since 1975.
Is there money in all this? Not so far. Crocodile farmers have invested R15 million since 1975 but, so far, have earned only R2 million.
The market is fickle and the overseas greens, angered by the amount of illegal skins going into women's handbags and men's briefcases, may yet wreck the market by calling a total boycott on all reptile skins. It would, said delegates, throw thousands throughout Africa out of work as well as make crocodiles worthless in economic terms so that governments will give up trying to protect them.

Submitted by: Mr Etienne du Pisani, Department of Anthropology, National Museum, P.O. Box 266, Bloemfontein, 9300 South Africa.

GIRL BITTEN BY PUFFADDER ON MOUNTAIN

Pretoria News, 16 March 1991, page 3

DURBAN. - Writhing in pain, a 14-year-old girl bitten by a puff-adder was carried off the Drakensberg on a horseback and then on a stretcher, treated at Himeville and taken to Grey's Hospital.
The girl, Claire Myhill, of Wartburg, is in a satisfactory condition in Grey's Hospital.
She was hiking with her family when she felt two bites on her thighs and saw a snake, as "thick as a tennis ball".
A member of the party ran down to Cobham camp to fetch Natal Parks Board ranger Graham Keet and a stretcher.
Mr Keet ran up with a medical kit and he bandaged Claire's legs. She was put on a horse until more level ground was reached and then transferred to a stretcher and carried down to the office.
She was taken to a Himeville doctor who put her on a drip, and took her to Grey's Hospital.

Submitted by: Mrs Rose Bates, 548 Boeing Street, Elardus Park, Pretoria, 0181 South Africa.

MAMBA ORDEAL: GIRL LUCKY TO BE ALIVE

Pretoria News, 15 April 1991, page 3

DURBAN. - First-year University of Natal social science student Cathy Mitchell (18) will never really know just how lucky she is to be alive after she shared a couch with a 1,7 m green mamba for two hours before it slid inside her T-shirt and down her back.
By last night, Miss Mitchell had recovered from her harrowing experience just 10 days after undergoing a sinus operation.
She said on Saturday she was watching a movie while lying on a couch at the home of a friend in Umdloti when she felt something move. It did not worry her at first.
"Every now and again I would feel something moving and I would hit down on the cushions and continued to watch the movie.
"I was wearing one of those large, sloppy T-shirts. After two hours, I felt something sliding down my back and I got up with a fright and just saw the tail of the snake which at this time was slithering on to the couch.
"There was not much I could do, but scream and shake myself and everybody in the house rushed to help me," said Miss Mitchell.
The snake was caught by rangers from the Fitzsimons Snake Park.
Badly shaken, Miss Mitchell broke out into a cold sweat when she realised that she could have died if the mamba had bitter her.
The owner of the snake park, Mr John Akers, said that he could not say just how lucky Miss Mitchell had been, except to point out that in the past three months there had been six confirmed mamba bites. Two of those bitten died.
"Many of my friends who telephoned and those who visited me said that I am very lucky to be alive. One thing I do know is that I will keep away from snakes," said Miss Mitchell.

Submitted by: Mrs Rose Bates, 548 Boeing Street, Elardus Park, Pretoria, 0181 South Africa.

SNAKES FINE

The Citizen, 31 August 1991, page 7

HONG KONG. - A Chinese court has fined and imposed suspended jail sentences on three men found guilty of blowing up pythons. The snakes killed by explosives were sold in Fujian province, where snake steak and soup are considered delicacies.

Editor

FROG MARCH

The Citizen, 30 August 1991, page 7

NICOSIA. - The Iranian port of Qazian is crawling with frogs. They have been "occupying city streets and encroaching on houses in large swarms" since Monday. The invasion has been linked to rising river levels in nearby marshes and a defunct frog breeding and canning factory, which has been closed since the 1979 Islamic revolution.

Editor

HERPETOLOGICAL BOOKS

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RECENT BOOKS ON HUSBANDRY AND CAPTIVE CARE

Part 1

All books reviewed by **BILL BRANCH**

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

Recent years have seen the publication of numerous books on reptile husbandry and popular species. I have given reviews of a number of these below. My aim is to both draw these publications to the attention of HAA members; and to present a balanced critique of their contents, noting their strengths and weaknesses. Some publishers offer discounts, and HAA members ordering books should enquire whether such a saving is available.

A PETKEEPER'S GUIDE TO REPTILES AND AMPHIBIANS

David Alderton, 1986. 117p, numerous colour illustrations. Salamander Books (52 Bedford Row, London Wc1R 4LR, England; locally available from Hodder, and Stoughton Southern Africa, P.O. Box 435 Eppindust, 7475). R21.95 plus postage, hardcover.

This is a well-edited and beautifully illustrated introductory text to keeping common species. It is in two parts. The first 49 pages include an introduction to the biology of reptiles and amphibians, as well as a discussion on the more practical problems of husbandry. Excellent colour photographs and drawings illustrate a number of simple set-ups for terrestrial and aquatic species, as well as showing some stunning advanced vivaria. The majority of the text (pp. 62-113) gives a selection of 63 common species, each illustrated in colour, with details of their preferred temperatures, food and housing. Unfortunately few African species are included (only *Geochelone pardalis, Kinixys belliana, Agama agama, Chamaeleo jacksoni, Varanus niloticus, Python regius* and *Xenopus laevis)*. An index, a simple bibliography for further reading, and a few useful addresses complete the book.

There are few mistakes. Although adult Nile monitors (*Varanus niloticus*) are scavengers and readily take meat, as listed under diet (p. 87), their main diet in the wild is freshwater crabs. Iguanids are not confined to the Americas; there are two genera, containing seven species, on Madagascar, and at least two species occur on the Pacific islands of Fiji. Although acknowledging that some authorities treat 'worm lizards' as a distinct suborder, and using the subordinal name Amphisbaenians (p. 76), the author still calls them lizards.

A number of important breeding aspects are overlooked and could cause confusion for the inexperienced keeper. Although the author discusses temperature-dependent sex (TSD), and its importance in the breeding of chelonians (p. 49-50), he overlooks the existence of TSD in the leopard gecko (*Eublepharus macularis*). Similarly, it is necessary to feed hatchling green iguanas (*Iguana iguana*) food soiled with adult faeces.

Until this was realised, many keepers hatched baby iguanas, only to have them starve to death because they kept them in sterile, ultra-clean environments. The young of this vegetarian species need to obtain the bacterial gut flora necessary for the breakdown of plant cells.

These are minor points, however, and Alderton has produced one of the better introductory texts to keeping herps. It should prove popular for the beginner.

SNAKES AND LIZARDS. THEIR CARE AND BREEDING IN CAPTIVITY

John Coborn, 1987. 208p, David & Charles Publ. (Brunel House, Newton Abbot, Devon TQ12 4PU, England). UK pounds 18.00 plus postage, hardcover.

David and Charles Publishers usually produce very good books, printed on good paper, well bound and profusely illustrated. This one is no exception. In content and presentation it could be considered the senior companion to the proceeding volume, although it is more restricted in scope, covering only squamates (despite the title it also includes amphisbaenians). The body of the book starts with an excellent introduction to 'Attitudes, Trade and Legislation', which although written from a British/American viewpoint, is nonetheless informative for African readers. After a short (20 page) overview of squamate biology and taxonomy, there follows the best section of the book. These are the chapters on 'Accommodation', 'General Care' and 'Captive Breeding', which are obviously based on Coborn's long association with reptile houses and zoological gardens, both as a curator and director. They offer sound and practical advice; good examples are the tables of plants suitable for 'heated dry' and 'heated humid' terraria. The second half of the book, as with that of Alderton's, summarises specific care for representative species commonly kept in captivity. These include 69 lizards, one amphisbaenian, and 42 snakes. Most are illustrated in either colour or black-and-white (some with both), but few are African.

In general, as a guide to the captive care of snakes and lizards, this book succeeds admirably. There are, however, a number of obvious oversights. One that is particularly strange, in a book subtitled 'care and **breeding** ', is the absence of specific reproductive details in all the species accounts except the first four gecko accounts. Although general aspects are well-covered in the earlier chapters, it is useful to know whether a particular species is viviparous or egg-laying, and just how many young to expect. TSD is again all but ignored, its existence being briefly acknowledged (p. 91). In this particular book it is peripheral as TSD has been shown to occur in very few squamates, eg. *Agama agama* (where it still needs to be confirmed) and the leopard gecko *Eublepharus macularis.* Nonetheless, given the popularity of the latter in collections it should have been dealt with in greater depth.

There are few typographical mistakes (*Haemachatus haemachatus*, p. 37; *Apparallactus capensis* , p. 38; Hydrophidae, p. 38 and p. 191), but for most part, the flaws are ones of omission. The range of *Mabuya quinquetaeniata* is not just 'Southern Africa'; only the southern race extends into the subcontinent, the typical race extends along the Nile to Egypt and west to the Algerian Sahara, whilst another race (*M.q. scharica*) extends through west Africa to Senegal. The suborder Amphisbaenia contains over 140 species

(not 100, p. 18), and they are divided among 4 families (not 1, p. 23). Calling the Feylinidae 'Limbless Skinks' (p. 154) is, at the least, confusing. The comment that "...lizards and snakes show no maternal interest in their offspring" is a generalisation that ignores the well-developed maternal behaviour in some skinks (eg. some American *Eumeces* spp.).

All-in-all, despite these relatively minor flaws, I have no hesitation in recommending this text to the interested reptile keeper.

MAINTENANCE AND REPRODUCTION OF REPTILES IN CAPTIVITY. VOL. 1. MAINTENANCE AND REPRODUCTION
Vincent L. Bels and A. Paul van den Sande (eds.), 1984 (publ. 1986). In: *Acta Zoologica et Pathologica Antverpiensia* No. 78 (obtainable from Royal Zoological Society of Antwerp, Koningin Astridplein 26, B-2018 Antwerpen, Belgium), US$12.00 (incl. postage), softcover.

This is a collection of 22 invited papers from some of the curators of the world's top reptile house, as well as researchers interested in reptile behaviour. Obviously it is not possible to record all the interesting papers, but I shall try to list some of the highlights.

After one of Carl Gan's typically concise and incisive introductions, Liliane Bodson surveys the history of keeping reptiles in captivity from early Egyptian records to the end of the 18th century. Matz then reviews those factors that induce reproduction in reptiles, and Carpenter presents a practical approach to 'Enclosure maintenance of lizards'. In a somewhat surprising finding, Malaret and Fitch note that the effects of varying food intake on a series of representative reptiles (the oviparous skink, *Scincella lateralis*; viviparous natricines *Storeria dekayi* and *Thamnophis sirtalis* ; and the oviparous colubrine *Diadophis punctatus*) has very little effect on the size and number of eggs or young. Vincent Bels discusses 'Ethological problems in the anoline lizard in captivity', and Chris Banks reports the important inbreeding in a colony of the green iguana (*Iguana iguana*) past the finding of increased infertility and infant mortality following fourth generation.

A series of case studies discuss husbandry and reproduction in the lizards, rhinocerus iguanas, *Cyclora c. cornuta* (Tonge and Bloxham); sail-tailed lizard, *Hydrosaurus amboinensis* (G. Visser); *Phelsuma* spp. (Sean McKeown); *Acrantophis dumerili* (Tom Huff); *Bothrops* spp. (Murphy and Mitchell); *Hydrodynastes gigas* (Honegger); yellow anaconda, *Eunectes notaeus* (Luttenberger); mangrove snake, *Boiga dendrophila* (Howard); the diamond-back terrapin, *Malaclemys terrapin centrata* (Sachsse); Indian crocodiles (Whitaker); and the tuatara (Goellner).

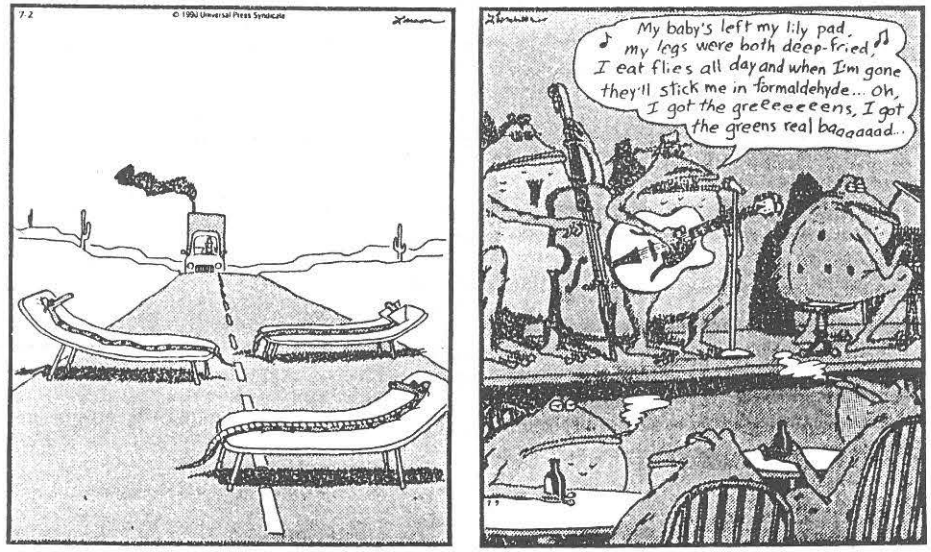
The practical problems of caring for large numbers of venomous snakes, held for venom collection, are discussed in a series of short papers. Leloup describes the large scale breeding and maintenance of Bothrops moojeni in captivity. In 1983 his facility held 1 145 snakes, over 800 of which were captive born and reared. Two aspects of the short note on 'Breeding cobras in Vietnam' by T. Kien, may surprise many keepers. The first is that the farm has an annual reproduction of 4000 snakes, and the others is

that the cobras are 'easily trained to feed on' an artificial pellet of fish meat (50%) with lard, salts and a few additives. A complimentary paper by Naulleau and Detrait details the results of venom collection from over 100 European Vipera reared in captivity either from birth or shortly thereafter.

Bert Langerwerf discusses 'Techniques for large-scale breeding of lizards from temperate climates in greenhouse enclosures'. During the period 1979-1983, Langerwerf produced around a 1000 hatchlings every year, and here he summarises his techniques. Members who attended the *Bloemfontein H.A.A. symposium* (April 1991) will have seen the presentation on Bert's facility in Alabama, and will therefore appreciate the wealth of practical experience behind his advice. Perhaps his most pertinent comment is that "Much (of his) time is spent breeding and rearing insects; indeed lizard breeding is mainly insect breeding." Pieau et al. give a good account of TSD in chelonians (in French), with a comprehensive (albeit now out-dated) bibliography on this 'in' topic.

The general quality of the publication is excellent, with good quality paper and a stiched binding. There are a number of spelling mistakes, and a particularly humerous misprint (p. 200, "Newborn snakes are maintained .... on a gravid substrate" !).

Although no articles deal specifically with African species, there are some on Madagascan reptiles (Sean McKeown, *Phelsuma*; Tom Huff, *Acrantophis dumerili*). Despite the limited local interest, however, this volume contains a wealth of information, and considering the very cheap price, it is excellent value.



Gus saw them when he crested the hill: snakes.
Three of them, basking on the road.
Probably diamondbacks.

H.A.A. COMMITTEE ELECTION 1992

In compliance with paragraph 9 of the H.A.A. Constitution (see *African Herp News* **13**, p.10), an H.A.A. Committee must be elected every two years.

With the exception of Dr N.H.G. Jacobsen, all elected committee members on the present H.A.A. Committee (as listed on the front inside cover of this newsletter) are available for re-election in their current portfolios or for any other position if nominated as candidates. Mr F. Farquharson (Secretary/Treasurer) and Mr G.V. Haagner (Additional Member), who are at present co-opted members, are also available for election in their present co-opted portfolios or for any other position on the committee if nominated. Mr R. Boycott (co-opted Journal Subeditor) is also available for election to any position on the committee. It should be noted that a Journal Subeditor cannot be elected, but will be co-opted by the new committee.

All paid-up African Members of the H.A.A. (excluding memberships registered in a name other than that of a person - see paragraph 12.1 in *African Herp News* **15**, p.11) are hereby invited to submit nomination forms to persons they wish to stand as candidates for election. The nominator must sign the form and send it to the nominee. If agreeable, the nominee should then sign the form and return it to the Electoral Officer. The nominator and nominee must both print and sign their names on the nomination form, and the nominee must indicate the position he wishes the nominee to accept (eg. Additional Committee Member). The nominee should return one form only (more than one nomination may be received), and would therefore be eligible for election to only one position on the committee.

Nominees wishing to obtain information regarding the duties of any particular portfolio on the committee are invited to write to or telephone the Electoral Officer, or telephone the Chairman at (051) 479-609.

The final list of candidates will be included in *African Herp News* **17**. H.A.A. members will then be requested to indicate their choice of a new committee.

Nomination forms may be returned by post or fax and must be received by the Electoral Officer no later than 28 February 1992.

Electoral Officer
Mr A.F. Flemming
PO Box 266
BLOEMFONTEIN, 9300
South Africa

Tel: (051) 479-609
Fax: (051) 479-681

HERPETOLOGICAL ASSOCIATION OF AFRICA

MEMBERSHIP FEES AS AT 1 JANUARY 1992

AFRICAN MEMBERSHIP

ORDINARY MEMBERSHIP

1 year membership R30.00. Submit in Rand or equivalent U.S. Dollar plus 10 %.
3 year membership R84.00. Sumbit in Rand or equivalent U.S. Dollar plus 10 %.

SCHOLARS MEMBERSHIP

1 year membership R20,00. Submit in Rand or equivalent U.S. Dollar plus 10 %.

OVERSEAS MEMBERSHIP

DOLLAR PAYMENTS

1 year membership $20.00. Submit in U.S. Dollars by personal cheque or money order.
3 year membership $56.00. Submit in U.S. Dollars by personal cheque or money order.

RAND PAYMENTS FROM OVERSEAS

1 year membership R49.00. Submit in ZAR or Rand by bankers draft or money order.
3 year membership R136.00. Submit in ZAR or Rand by bankers draft or money order.

Owing to numerous banking problems, members are kindly requested not to submit payments directly to any Building Society or Bank account. All payments must be submitted directly to:

THE SECRETARY/TREASURER
HERPETOLOGICAL ASSOCIATION OF AFRICA
P.O. BOX 20142
DURBAN NORTH
4016 REP. SOUTH AFRICA

PLEASE STATE IN WHICH YEAR YOU REQUIRE MEMBERSHIP TO BEGIN. MEMBERSHIP RUNS FROM 1 JANUARY TO 31 DECEMBER OF ANY YEAR. SHOULD MEMBERSHIP BE TAKEN OUT IN THE LATTER PART OF THE YEAR, YOU WILL RECEIVE ALL JOURNALS AND NEWSLETTERS PERTAINING TO THAT YEAR.