The present state of affairs cannot be allowed to continue where 33% of members are more than a year behind with payments. Firstly the costs of producing, printing and posting, both the newsletter and journal, have risen steeply over the last few years and paying members cannot be expected to subsidise "non paying members". Secondly it does not in any way benefit the Association by quasitastic membership figures when only 56% of members are paid up. It is felt that if a member does not have the enthusiasm to renew his or her membership, then it is better if these people are removed from the membership list. To conclude it has been decided that members who are not paid up by the time the next Journal goes to press, will not receive the next Journal or further newsletters.

Payment of membership fees

Membership fees payable to the Association are due on the 1st of January each and every year. As the Association does not charge prospective members on entrance fee, it is felt that those members who join in the latter part of the year will be liable for renewal of membership, as all other members, on the 1st of January the following year.

Correspondence and receipts

As the South African postal rates have spiralled over the past few years receipts for all money received and correspondence from the Secretary/Treasurer will be posted with the newsletter. Only in urgent matters will separate postage be considered.

Finances

As no balance sheet on income and expenditure account has been published since 1979 the present treasurer does not hold himself responsible for the accounting of the moneys of the Association prior to the 26th February 1985 when the sum of R1 223.83 was transferred from Port Elizabeth to Bloemfontein. However I shall be accountable for that sum and all other moneys received and spent from the above date. An account of income and expenditure will be sent to all members as close to the 26th February each and every year.

R. DOUGLAS

Delta Books
Johannesburg

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PO Box 41021
Craighall 2024
South Africa

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Johannesburg

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Editorial

H.A.A. Newsletter 4 was hand-produced on short notice during a time of unrest, demonstration and strike under the local population of mechanical devises. However, after all powercucks were repaired we made an effort to improve the format of this issue. More good news is that we have received more donations from publishing companies to help with the production of the Newsletter. Efforts are made to involve even more such companies.

I bear from Rod Douglas (H.A.A. secretary) that he received several letters from members complaining about the way this association is run. I must admit that in a way I agree with the voices going up, but then on the other hand what did the members do to ensure a well organized association? The symptoms to me are obvious and to diagnose was not difficult either. An association without a clearly defined constitution? How could members hope to be better organized? The absence of an elected committee surely means trouble for any association.

In the Editorial of the January 1980 issue of the H.A.A. Journal it was stated that "the Association is awakening from a deep hibernation." Hopefully in this issue you will find evidence that we are committed ourselves to speed up the arosal of the Association. In this issue and the newsletters to come I will take up the constitutional development where we left it in 1980 and hopefully mould it into a strong foundation. What the H.A.A. needs now is a general meeting to discuss a new constitution and the implementation thereof. Prof. E. van Dijk mentioned it into a strong foundation. What the H.A.A. needs now is a general meeting to discuss a new constitution and the implementation thereof.

From having taken over the above responsibilities in March this year, certain factors have been brought to my attention, and it is felt that members should be advised accordingly.

If members should have any queries as regards membership or subscriptions please write to me, as this is the only way I can deal with such problems. I would like to thank those members who have taken the trouble to put their problems before me.

Apology

I would firstly like to apologize to all members who took offence to the wording on the last membership reminder. They were sent to me for inclusion with the last Journal and there was nothing that could be done to rectify the matter at such short notice. The wording has accordingly been changed and it is hoped that the new wording meets with members approval.

Membership

After an analysis of the membership renewals which were sent out with the last Journal, I was to say the least, horrified at the state of affairs. A breakdown will give some idea of what I mean.

65% of members had not yet renewed for the current year (R3).
20% of members had not paid for 84/85 (2 years).
8% of members had not paid for 83/84/85 (3 years).
5% of members had not paid for 82/83/84/85 (4 years).

Therefore only 18% of members were paid as at 1st March 1985. The position has, I am pleased to report, improved to 45% as at 30th April 1985. The majority of outstanding memberships are now overseas members.
CONSTITUTION OF THE H.A.A.

While paging through "old" H.A.A. journals, the heading "New Constitutional for the H.A.A." struck me. After reading this proposed constitution and the Editorial (February 1980) I searched through the following issues hoping to follow the embryonic development of a new constitution. Needless to say, this was another stillborn baby of Mother H.A.A.!

Synonym to any well organized association is a sound revision of the "constitution" is long overdue. Revive the H.A.A. and deliver a worthwhile service to the members (300 plus). It therefore seems obvious that the revision of the "constitution" is long overdue.

Original Constitution

1. The name of the Association shall be the Herpetological Association of Africa.

2. The objects of the Association are:

2.1 To collect and exchange, inter alia, through the medium of the Association Journal, information on all aspects of the zoogeography, ecology and behaviour of the herpetofauna of Africa.

2.2 To build up comprehensive study collections of African reptiles and amphibians in the Museums of Africa.

2.3 To educate the public towards a sane and reasonable attitude to reptiles and amphibians in general and snakes in particular. This object may be carried out by means of lectures, exhibitions, films and articles.

2.4 To promote, where necessary, the addition of further reptiles and amphibians to the list of protected fauna. To ensure that the protection afforded by existing laws and by National Parks and Wild Life Sanctuaries is effective.

2.5 To encourage the study of reptiles in captivity and exchange specimens among members.

2.6 To organise expeditions to the lesser known areas of Africa and to render all possible assistance to members on field trips away from their own districts.

2.7 To collect and receive subscriptions and donations for the purpose of carrying out the above objects.

Membership

3.1 Membership shall be open to any herpetologist, resident in Africa, who has given satisfactory proof of his enthusiasm and ability.

3.2 Candidates for membership may be introduced by a member, or may qualify by submitting material and observations to the Hon. Secretary.

3.3 Herpetologists and organisations outside Africa may become Associate Members. An Associate Member shall have no say in the running of the Association, but will receive the Journal as it appears.

3.4 A member may be expelled from the Association for failing to support its objects. Such action shall require a two-thirds majority in a postal vote by all members.

5.1 Members shall pay an Entrance Fee of $1 Rhodesian (or its equivalent) and an Annual Subscription of $1 Rhodesian (or its equivalent). Associate Members shall pay no Entrance Fee, but shall pay an Annual Subscription equivalent to $1 Rhodesian, except where an exchange of publications has been agreed. Life Members shall subscribe $15 Rhodesian (or its equivalent), or $6 Rhodesian (or its equivalent) if over the age of 60.

5.2 The Entrance and first Annual Subscription shall be paid on admission to Membership. Thereafter, subscriptions shall fall due on the first of April each year. Membership is automatically forfeited by those more than one year in arrears with subscriptions.

6.1 The committee shall consist of three members - editor, treasurer and secretary - should be elected one year in advance, and will serve for one year. A member may be expelled from the Association for failing to support its objects. Such action shall require a two-thirds majority in a postal vote by all members.

6.2 The committee will hold office for one year.

9. The Constitution may be amended by a two-thirds majority of members voting by post. Provided that not less than 51% of all paid-up Association Members cast their votes.

10. The Official organ of the Association shall be the "Journal of the Herpetological Association of Africa", published once or twice annually and circulated to all members. This will be compiled by the Hon. Secretary, acting as Editor, using information and material received from members, abstracted from scientific journals, etc.

11. The Association Badge shall be a rearing Banded Cobra (Naja haje spp. annulifera) in black and gold, superimposed on a green map of Africa. Below, on a scarlet scroll, is the motto "Ex Africa semper aliquid novi".

As a first step of constitutional development in the Association, I want to refresh the minds of our members with the "proposed new constitution" of 1980 and the following reaction:

1. Editorial (February 1980)

"In this issue of the Journal a new constitution is proposed. Our Association should offer a service to all its members - and all the members should be prepared to contribute towards the efficient functioning of the H.A.A. The new constitution proposes that the committee - editor, treasurer and secretary - should be elected one year before they take office, and should serve for one year."


Below is a modified constitution. Members are requested to submit suggestions and comments to the editor before the end of May 1980, so that these may be included in the next issue of the Journal. Where differences of opinion arise, members will be requested to vote. The only major changes to the constitution are that the committee will be elected a year in advance, and will serve for one year.

CONSTITUTION AND RULES

1. The name of the Association shall be the Herpetological Association of Africa.

2. The objects of the Association are:

2.1 To collect and exchange, inter alia, through the medium of the Association Journal, scientific journals and popular literature, information on all aspects of the zoogeography, ecology and behaviour of the herpetofauna of Africa.

2.2 To build up comprehensive study collections of African reptiles and amphibians in the Museums of Africa.

2.3 To educate the public towards a sane and reasonable attitude to reptiles and amphibians in general and snakes in particular. This object may be carried out by means of lectures, exhibitions, films and articles.

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2.5 To encourage the study of reptiles in captivity and exchange specimens among members.

2.6 To organise expeditions to the lesser known areas of Africa and to render all possible assistance to members on field trips away from their own districts.

5.1 Members shall pay an annual subscription as determined from time to time by the committee.

6.1 The committee shall consist of three members resident in Africa; a treasurer, a chairman/secretary and an editor.

6.2 The committee will hold office for one year.

6.3 A treasurer elect, chairman/secretary elect and an editor elect shall be voted for, one year before they take office.
5. Editorial (December 1981)

"Final voting on the new constitution will be delayed until the next issue, as the management of the Association and the Journal will then be stable."

6. Editorial (December 1982)

"Three years ago it was planned to revise and then publish our constitution. The general response was limited and the plans dropped. If so desired this matter could be raised again, but ideally should be discussed at a meeting."

In the next issue I will then publish a few suggestions hopeing to receive more suggestions and comments in order to draw up a concept constitution for the members to vote on.

INSTITUTIONAL NEWS

1. Department of Zoology
   University of Stellenbosch
   Stellenbosch

A. Current projects by staff members

1. Factors that determine the distribution of lizards in the fynbos ecosystem — P. le F.N. Mouton, B.W. Oelofsen, D.P. Mostert.


4. Changes in ovarian histology in the live-bearing skink Mabuya capensis in the southwestern Cape. (Currently under review).


B. Current projects by students

1. Effects that determine the distribution of lizards in the fynbos ecosystem — P. le F.N. Mouton, B.W. Oelofsen, D.P. Mostert.


4. Changes in ovarian histology in the live-bearing skink Mabuya capensis in the southwestern Cape. (Currently under review).


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The specification of the badge should be amended to 'rearing Banded Cobra (Naja haje). Do not specify the subspecies as the banded phase occurs in both annulifera and anchietae.'

Don Broadley

"Point 7 of the old constitution should be incorporated and office-bearers will be associated, or within 30 days of the appearance of the final journal with which the outgoing management of the Association will have his/her/its membership annulled."

May 1 suggest voting within 3 months preceding the May 2(f) on the new discarded. Perhaps we should cast their votes.

---

3. Editorial (December 1980)

"Only a few constructive comments were intimated from the latest attempt. These are appreciated and some further improvements are made in this issue."

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John Visser

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3. Editorial (December 1981)

"Final voting on the new constitution will be delayed until the next issue, as the management of the Association and the Journal will then be stable."

---

6. Editorial (December 1982)

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Don Broadley

"Point 7 of the old constitution should be incorporated and 2(f) on the new discarded. Perhaps we should substitute 'to improve the journal', I suggest substituting for point 4 of the old 'Anyone who brings the Association into disrepute will have his/her/its membership annulled...'

May 1 suggest voting within 3 months preceding the appearance of the final journal with which the outgoing office-bearers will be associated, or within 30 days of the appearance of the journal.

I feel we should have a management committee of 6 members: the editor, secretary/treasurer, chairman being mandatory.

Both old and new constitutions should be published side-by-side with the final set of comments. The new constitution would be adopted after further comments and final voting published with issue 24.

John Visser
News items

1. I spent 4 weeks collecting tadpoles in SWA in January, working with Dr. H. Berger-Dell’mour (State Museum) and Mike Griffin (Department of Nature Conservation). The rains were a little late, but we managed to record many voices and produce a collection of tadpoles. It was quite exciting hunting for Leptopelis bocagei at night between feeding elephants.

2. I have been appointed as an Associate in Herpetology of the Museum of Natural History, University of Kansas. This is an honorary position. They have an association on every continent.

3. Department of Zoology

University of the Western Cape

The genus Scelotes displays a full spectrum of limb regression ranging gradually from pentadactyl to completely limbless forms. This material is ideal for investigating several interesting problems in the field of evolutionary biology. For example, how and why did limblessness evolve in this genus? How are the fifteen or so species interrelated? What are the suite of characteristic associated with limb regression? To what extent are the morpholgy a reflection of phylectic history?

Ernst Baard

3.1 Department of Biochemistry

University of the Western Cape

Belfonte

Dr. Alan Channing reports:

My research is based on a survey of southern African tadpoles. This is being undertaken in collaboration with various workers around the country.

Projects in detail

1. With Dr. D. Crapon de Caprona, University of Bielefeld and Ricky Taylor, Natal Parks Board: Breeding Hyperolius marmoratus. We have a colony of frogs breeding in her laboratory.

2. With Dr. D. Crapon de Caprona: Description of breeding and tadpole of an East African Hyperolius.


Visiting Herpetologist

Dr. R.C. Drewes, California Academy Sciences spent two weeks in the middle of 1984 with me. We collected frogs and tadpoles in Namaqualand, including a new species.
COLLECTIONS OF SCIENTIFIC PAPERS HONORING VENERABLE POPULATION BIOL O GISTS SEEM TO BE PRO LIFICATING OF LATE. THE PRESENT VOLUME, ALTHOUGH PERHAPS A TRifle MORE MO dest than those dedicated to G.E. Huchinson, R.H. MacArthur, and E.E. Williams, nonetheless stands as an equitably substantial tribute to another eminent field worker, James L. Fitch.

Appropriately, population studies of snakes dominate this volume (Fitch not only pioneered difficult work on snake ecology, but also contributed some of the most detailed and lasting ecological studies of serpents). Snakes are exceedingly intractable subjects for population studies, being cryptic, rare and mercilessly persecuted by humans (including herpetologists).

In the introduction, Duellman exploits the turtle-hare analogy, pointing out that Fitch avoided biological fads and jargon (often glib, fast and simplistic) in preference for solid natural history, frequently painstakingly slow

The final volume of Alytes includes ten contributions which were published in the first three volumes of Volume 1 (1982-1984). These papers cover various aspects of research: taxonomy, 11 synonomy, 12 contributions to the study of variation, 13 studies with implications in conservation, 14 notes on herpetological collections, 15 notes on herpetological surveys, 16 notes on conservation, 17 notes on herpetological surveys, 18 notes on conservation, 19 notes on conservation, 20 notes on conservation.

Subscriptions to Alytes are inscribed in the journal. The International Society for Herpetology is independent from the British Herpetological Society. The membership of the International Society for Herpetology is approximately 2500 members. Memberships may be obtained from Dr. Alan Dubois, General Secretary, International Society for Herpetology, PO Box 186, Bloemfontein, South Africa.

BOOKS


Collections of scientific papers honoring venerable population biologists seem to be proliferating of late. The present volume, although perhaps a trifle more modest than those dedicated to G.E. Huchinson, R.H. MacArthur, and E.E. Williams, nonetheless stands as an equitably substantial tribute to another eminent field worker, James L. Fitch.

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Maps

The Government Printer will supply you with a catalogue from which you can order your maps.

(a): 5,000 maps portray 1° S X 2° E
(b): 250,000 maps portray 1° S X 2° E
(c): 10,000 maps portray 15° S X 15° E

I hope this explanation will encourage future collectors to use the recognized system. In this way you could make a valuable contribution towards mapping the Reptiles and Amphibians of Africa.

Fig 1. Bloemfontein located in the degree-square 29° south latitude and 26° east longitude (29° 06'S; 26° 13'E).

Fig 2. The degree-square is divided into four equal-sized (half-degree) squares (A, B, C, D). * Bloemfontein; 29° 06'S; 26° 13'E.

Fig 3. Each half-degree square is divided into four equal-sized (eighth-degree) squares (a, b, c, d). Bloemfontein locus: 2926 Aa.

Fig 4. Each quarter-degree square is divided into four equal-sized (eighth-degree) squares (1, 2, 3, 4). Bloemfontein locus: 2926 Aa 2.

References


J.H. van Wyk

MILWAUKEE PUBLIC MUSEUM
REALISTIC RELEASES

A New Frog of the Genus Atelopus (Anura: Bufonidae)
From a Venezuelan Cloud Forest. Enrique LaMarca.


WILD LIFE SOCIETY MALUTI CENTRE
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TELEPHONE: 05270-287, 148
ANNOUNCING THE NINTH INTERNATIONAL HERPETOLOGICAL SYMPOSIUM ON CAPTIVE PROPAGATION & HUSBANDRY AT SANDIEGO, CALIFORNIA, JUNE 26-30, 1985

CALL FOR PAPERS

All herpetologists are invited to submit for consideration the titles of papers they wish to present at the 9th International Symposium on Captive Propagation and Husbandry to be held at the University of San Diego in San Diego, California. A pre-day to the conference will take place at the Roeding Park Zoo in Fresno, California on June 25, 1985. Paper lengths may range from 20-40 minutes. A preliminary program will be established by April, 1985 so a 100-150 word abstract of a presentation should be submitted by contributors prior to 1 April 1985. Titles should be submitted as soon as possible. Final manuscripts should be submitted prior to 15 June 1985. Submit all program information to: Sean McKeown, Curator of Reptiles, Program Chairperson, Roeding Park Zoo, 894 West Belmont Avenue, Fresno, California 93728, (209) 488-1096.

REVIEWS OF BONN SYMPOSIUM ON AFRICAN VERTEBRATES

An International Symposium on Systematics, Phylogeny and Evolutionary Ecology of African Vertebrates was held May 15-18, 1984 in Bonn, Federal Republic of Germany, to commemorate the 50th anniversary of the opening of the public exhibits of the Zoologisches Forschungsinstitut und Museum Alexander Koenig. Forty contributors from 14 countries presented papers. The travel expenses of the invited participants were reimbursed in part by a grant from the German Science Foundation. Karl-L. Schuchmann, Ph.D., Assistant Curator of Ornithology organized the symposium. Herpetologists who participated in the symposium, and the titles of their presentations, were:

Ulrich Joger. The African Gekkonid radiation — preliminary results on evolution and historical biogeography. (Bonn, F.R. Germany)

Barry Hughes. A systematic review of African Green Snakes of the genus Philodryas. (Accra, Ghana)

E. Buffetaut. Zoogeographic history of African crocodilians since the Triassic. (Paris, France)

Wolfgang Boehme. Zoogeographical patterns of the herpetofauna of the African Sub-saharan savannah belt. (Bochum, F.R. Germany)

Hartwig Berger-Dell’Mour. Transition from normal to serpentiniform appearance in the South African genus Tetracanthocolpis Merrem, Gerrhosauridae, Sauria. (Windhoeck, Namibia)

Jens Rasmussen. The retinas of some biogeic snakes including a discussion of some evolutionary trends in advanced snakes (Caenophidia). (Copenhagen, Denmark)


Benedetto Lanza. Systematics and biogeography of the Somali amphibians and reptiles. (Florence, Italy)

Scott Moody. The phylogenetic relationships and zoogeographic origins of the lizards of the infraorder Iguania (Agamidae, Chamaeleonidae and Iguanidae) inhabiting Africa and Madagascar. (Athens, Ohio, U.S.A.)
The effects of temperature on digestion in *Vipera aspis*. 
Guy Naulleau, Centre d'Etudes Biologiques des Animaux Sauvages, Villers-en-Bois — 79360 Beauvoir-sur-Mer (France). ABSTRACT — The effects of temperature on digestion were studied in *Vipera aspis* at different temperatures, between 10 and 35°C. At 10°C, all prey was regurgitated. At 15°C, regurgitation rate declined to 56% while at 30°C it declined to 26%. At 35°C, only 6% of the prey was regurgitated. The duration of digestion increased with temperature, but the percentage of wet mass of the prey excreted remained relatively constant. Feeding was dependent on temperature at which the vipers were kept. The incidence of food acceptance increased from 40% to 9% at 15°C and 20°C, respectively, to 85% and 100% at 25 and 30°C.


Structure of complex iguana nests. A. Stanley Rand and Beverly Dugan. Observations of nesting female *Iguana iguana* have shown that several may sequentially enter the same burrow to lay their eggs. To discover what was happening underground four burrow systems were excavated at two sites. They showed that up to 8 females may lay eggs in one system and that systems may have up to 24 meters of interconnected underground tunnels with multiple openings to the surface and reach depths of a meter. Two of the systems were more complex than the others though they did not contain more clutches of eggs. These systems probably represent more than a single season of use. Each female using a multiple burrow system seems to do as much digging as does a female nesting by herself but the nests in a communal burrow system are deeper and probably better protected.

Copeia, 1983(3), pp. 705-711

The influence of light and temperature on diel activity rhythms in the sand boa, *Eryx conicus*. R.A. Griffiths. Department of Zoology, Birbeck College (University of London), London, WCIE 7HX, England. ABSTRACT — In the nocturnal snake *Eryx conicus* the light-dark cycle was a more effective synchronizer of diel activity than were fluctuations in temperature. Under a light-dark cycle and constant temperature, the rhythm became damped but a light-dark or temperature cycle persisted under constant temperature. The level influenced the amplitude of the rhythm but did not affect the phasing of activity. Consequently under low constant temperature the rhythm became damped but a main nocturnal pattern was retained. There was little evidence that the activity rhythms synchronized by light, dark or temperature cycles persisted under constant conditions.

Journal of Herpetology, Vol. 18, No. 4, pp. 374-380, 1984

Spacing patterns in alligator nests. A. Woodward, T. Hines and C. Abercrombie. Florida Game and Fresh Water Fish Commission, Wildlife Research Laboratory, 4005 S. Main Street, Gainesville, Florida 32601, USA. ABSTRACT — The pattern of alligator nest location is measured for four consecutive years across a set of quadrats on Orange Lake (Alachua County) Florida. The nests are clumped, and this clumping is evident even given controls for habitat heterogeneity.

Journal of Herpetology, Vol. 18, No. 1 pp. 8-12, 1984

SSAR GRANTS-IN-HERPETOLOGY
The Society for the Study of Amphibians and Reptiles is pleased to announce that proposals are now being accepted for the 1985 Grants-In-Herpetology Program. This Program is designed to provide financial support to deserving individuals or organizations engaged in research on or conservation of amphibians and reptiles. All applicants (or their advisor or sponsor) must be a member of SSAR. Grant proposals will be considered in the following areas.

1. Graduate student Herpetological research.
3. Regional Herpetological Society programs or projects.
4. Herpetological research in Zoos.
5. Field work (Auto Mileage).

Each proposal must include the following information:
(A) Abstract, (B) Background and Objectives of the proposed project, in terms of its relevance to herpetology, (C) Methods of carrying out the research or conducting the project, (D) Budget for the project, which should not exceed $430 in each category, and (E) Curriculum Vitae and Letter of Support (if applicable).

The proposal must be typed double spaced and must not exceed 5 pages, excluding cover page, abstract, budget, curriculum vitae, and bibliography. All proposals must be postmarked no later than 1 February 1985. The deadline for receipt of applications is 1 February 1985.

For additional information on proposals see the December 1984 issue of *Herpet Review* or write:
Dr. James Bacon
Department of Herpetology
Zoological Society of San Diego
P.O. Box 100
San Diego, CA 92112

PUPILS FIND A HISSING SNAKE IN LIBRARY

Friend Correspondent
DEWETS DORP — Most school pupils are familiar with the expression "a snake in the grass," but finding a snake living in the school library was a new experience for Tableau van den Berg, who is a Std. 9 pupil at the Christian de Wet High School here. The incident happened last week, when he and fellow pupil, Mr. Theo van der Meulen, Mrs. Theresia Steenkamp, what a noise was being done behind the door. Mrs. Swartz and Tabele left the room immediately and went to ask help from woodwork teacher Mr. Johan Pienaar. After a short struggle, during which the snake was spitting and hissing continually, Mr. Pienaar and another Std. 9 pupil, Arthur Combrinck, managed to kill it. No one knows how the snake got into the library, or how long it had been there.

The Friend, April 22, 1985

SSAR GRANTS-IN-HERPETOLOGY

Two recent reports show that exploitation of frogs in India and Bangladesh to produce frogs for the restaurant trade in many western countries and in Japan, is posing a serious threat to frog populations and to ecosystem stability in ricefields and natural wetlands in the subcontinent.

Charles M. Fugler reports, in the *Fisheries Information Bulletin* of the Bangladesh Fisheries Resources Survey System (June 1983), that the Indian Bullfrog *Rana tigrina* is the main target. The report is discussed in the November edition of the *TRAFFIC Bulletin*. It speaks of the economic dependence of large numbers of people in Bangladesh on the frog export trade, which earned Bangladesh $146 million in foreign earnings in 1977-1981. Because of this exploitation, wild populations of bullfrogs are becoming seriously depleted, particularly in the Sylhet and Mymensingh districts, where 80% of the export stock originates. There is a ban on collecting between 15 April-15 May there but this is largely ignored, and does not cover the whole breeding season, which may last till July. Fugler suggests that a two-year moratorium to allow populations to recover may be the only realistic solution.

Herpetologist Rene Honegger, writing in a recent edition of the *Tropics Anecdotce magazine*, reports similar problems in India, especially in the marshes around Calcutta, Bombay and Hyderabad. He estimates the Indian catch at around 10,000 tonnes per year.

Research in China on a population of 12,000 frogs in a rice-growing area showed that they consume around 740,000 insects a day, most of which are potential rice pests. Frogs also provide a food source for many birds, reptile and amphibian species; their over-exploitation must inevitably upset the natural balance of wetlands. Frogs are very strictly protected in China for these very reasons. There is a strong case for using complementary conservation Conventions like CITES and Ramsar to foster an international approach to solving the problem elsewhere.
The effects of temperature on digestion in *Vipera aspis*.


ABSTRACT — The effects of temperature on digestion were studied in *Vipera aspis* at different temperatures, between 10 and 35°C. At 10°C, the light-dark cycle was a more effective synchronizer of diel activity than were fluctuations in temperature. Under a light-dark cycle and constant temperature, the temperature level influenced the amplitude of the rhythm but did not affect the phasing of the activity. Consequently, under constant temperature, the rhythm became damped but a mainly nocturnal pattern was retained. There was little evidence that the activity rhythms synchronized by light-dark or temperature cycles persisted under constant conditions.

Journal of Herpetology, Vol. 18, No. 4, pp. 374-380, 1984

Spacing patterns in alligator nests. A. Woodward, T. Hines and C. Abercombie, Florida Game and Fresh Water Fish Commission, Wildlife Research Laboratory, 4005 S. Main Street, Gainesville, Florida 32601, USA.

ABSTRACT — In the nocturnal snake *Dryodes coucica* the light-dark cycle was a more effective synchronizer of diel activity than were fluctuations in temperature. Under a light-dark cycle and constant temperature, the temperature level influenced the amplitude of the rhythm but did not affect the phasing of the activity. Consequently, under constant temperature, the rhythm became damped but a mainly nocturnal pattern was retained. There was little evidence that the activity rhythms synchronized by light-dark or temperature cycles persisted under constant conditions.


Structure of complex iguana nests. A. Stanley Rand and Beverly Dugan. Observations of nesting female *Iguana iguana* have shown that several may sequentially enter the same burrow to lay their eggs. To discover what was happening underground four burrow systems were excavated at two sites. They showed that up to 8 females may lay eggs in one system and that a system may have up to 24 meters of interconnected underground tunnels with multiple openings to the surface and reach depths of a meter. Two of the systems were more complicated than the others though they did not contain more clutches of eggs. These systems probably represent more than a single season of use. Each female using a multiple burrow system seems to do as much digging as does as female nesting by herself but the nests in a communal burrow system are deeper and probably better protected.

Copeia, 1983(2), pp. 465-475

Cladistic relationships among gekkonid lizards. Arnold G. Kluge. A reevaluation of individual and interspecific variation in branchial arch osteology in gekkonid lizards and the use of outgroup criterion led to the conclusion that the continuous nature of the second ceratobranchial-epibranchial rod in *Anaryulus* and *Caleonyx* is an evolutionary reversal. An independently evolved autopomorphy is also proposed for the continuous second branchial arch in *Gonatosodes vitattus*.

The largest assemblage of gekkos currently recognized, the "Gekkoninae," is divided into two groups on the basis of the presence or absence of the second ceratobranchial. The absence of the second ceratobranchial, a synapomorphy in the Gekkonoida, is diagnostic of the 35 genera referred to the Gekkonini, while the remaining genera are left sedis mutabillis in the "Gekkoninae." Two new genera are described and a third is resurrected from synonymy. Recognition of these three genera eliminates all known intrageneric variation in the second ceratobranchial, except for that observed in *Pristurus*. *Pristurus* appears to be a natural group, and those species without a second ceratobranchial belong to the most derived assemblage within the genus. Various corroborating synapomorphies suggest that the generic revisions are valid and that the Gekkonini is monophyletic.

Copeia, 1983(2), pp. 465-475


ABSTRACT — In the nocturnal snake *Dryodes coucica* the light-dark cycle was a more effective synchronizer of diel activity than were fluctuations in temperature. Under a light-dark cycle and constant temperature, the temperature level influenced the amplitude of the rhythm but did not affect the phasing of the activity. Consequently, under constant temperature, the rhythm became damped but a mainly nocturnal pattern was retained. There was little evidence that the activity rhythms synchronized by light-dark or temperature cycles persisted under constant conditions.

Journal of Herpetology, Vol. 18, No. 4, pp. 374-380, 1984

SSAR GRANTS-IN-HERPETOLOGY

The Society for the Study of Amphibians and Reptiles is pleased to announce that proposals are now being accepted for the 1985 Grants-In-Herpetology Program. This Program is designed to provide financial support to deserving individuals or organizations engaged in research on or conservation of amphibians and reptiles. All applicants (or their advisor or sponsor) must be a member of SSAR. Grant proposals will be considered in the following areas:

1. Graduate student Herpetological research
2. Herpetology-oriented conservation
3. Regional Herpetological Society programs or projects
4. Herpetological research in Zoos
5. Field work (Auto Mileage)

Each proposal must include the following information:
(A) Abstract, (B) Background and Objectives of the proposed project, in terms of its relevance to herpetology, (C) Methods of carrying out the research or conducting the project, (D) Budget for the project, which should not exceed $430 in each category, and (E) Curriculum Vitae and Letter of Support (if applicable). The proposal must be typed double spaced and must not exceed 5 pages, excluding cover page, abstract, budget, curriculum vitae, and bibliography. All proposals must be postmarked no later than 12 April 1984 to allow populations to recover may be the only realistic solution.

Herpetologist René Honegger, writing in a recent edition of *Reptiles & Amphibians magazine*, reports similar problems in India, especially in the marshes around Calcutta, Bombay and Hyderabad. He estimates the Indian catch at around 10,000 tonnes per year.

Research in China on a population of 12,000 frogs in a rice-growing area showed that they consume about 740,000 insects a day, most of which are potential rice pests. Frogs also provide a food source for many bird, reptile and amphibian species; their over-exploitation must inevitably upset the natural balance of wetlands. Frogs are very strictly protected in China for these very reasons. There is a strong case for using complementary conservation Conventions like CITES and Ramsar to foster an international approach to solving the problem elsewhere.
**NEW MEMBERS**

S. Farrel (Reptile World), P.O. Box 1429, East London 520

Allan Chadwick, 7 Knoll Place, Westville 3630

M. Reid, P.O. Box 55, Link Hills Waterfall 3652

G. Alexander, 92 Jan Hofmeyer A2, Westville 3630

Mr. C.W. Reid, P.O. Box 10457, Marine Parade, Durban 4051

P. la Hause de la Loi, Pouchou Fishing Project, P.O. Box 40, Jozini 3969

Richard A. Russell, 26 Sandalwood, 49 Montclair Road, Montclair, Durban 4001

Dr. J.A. Maxwell, 61 Tunbridge Drive Cowies Hill, Pinetown 3600, Natal

Doug Cooke, c/o Crookes Brothers Ltd., P.O. 561

Mr. Credic W. Jeuens, P.O. Box 429, Pietermaritzburg 5200

J.C. Vorster, 158 Convingham Avenue, Redhill, Durban 3200

Mr. M. Griffin, P.O. Box 9557, Windhoek, 9000, Namibia

Mr. M.N. Ercight, 1007-701 Don Mills Rd, Toronto, Ontario, Canada

World Snake Study center, Woburnsstrasse 39, (Hau Belveder), CH-6314 Unterager, Switzerland

Mr. C.J. Leonard, Dept. Zoology, University of the Western Cape, Private Bag X17, Bellville 7530, R.S.A.

Dr. A.J. Wright, 401 Salbany, 50 Albany Cove, Dunbar 4001, R.S.A.

Mr. P. le F.N. Mouton, Dept. Zoology, John E. Rillerman Museum, University of Stellenbosch, Stellenbosch 7600, R.S.A.

Mr. D.P. Mostert, Dept. Zoology, University of Stellenbosch, Stellenbosch 7600, R.S.A.

M. P. Erasmus, Posbus 16624, Pretoria Noord 0116, R.S.A.

Mr. J. Williams, Afd. Natuurbewaring, Posbus 384, Pretoria 0001, R.S.A.

Mr. B.S. Rubidge, National Museum, P.O. Box 266, Bloemfontein 9300, R.S.A.

The following members have joined following an article in "Herpetological Review" giving details of the ff. A.A.

R. Wahlgren, c/o Skanska S-211 02 Sweden

W.E. de Ruyter, c/o Anton Barmer Zur Station 120

Mr. H.M. Wild, c/o Skanska S-211 02 Sweden

The Library, Adventist University of Eastern Africa, P.O. Box 2500, Eldoret, Kenya

F. Wartous, 12605 Old Dorm Pl, Herndon Virginia 22070 U.S.A.

Joe Bisconse, 132-35 St Ozone Park, New York 11417, U.S.A.

University of Kansas Libraries, Periodicals Section

Ms. Herbert Roter, c/o Anton Barmer Zur Station 120

Mr. P. Chippindale, 2125 Casey Avenue Gloucester, Ontario, Canada K1J 6B7

Robert Gruss, 6035 Broadway 4-E Bronx New York 0471 U.S.A.

Mr. D.P. Mostert, Dept. Zoology, University of Stellenbosch, Stellenbosch 7600, R.S.A.

Mr. P. Chippindale, 2125 Casey Avenue Gloucester, Ontario, Canada K1J 6B7

Brian Holton, Etoha Game Reserve, P.O. Okaakveyo via Otjo, S.W. A. 9000

Mrs. G. Pieterson, 103 Izaak Street, Kilner Park, Pretoria 0186

Mr. J.J. Snyman, P.O. Box 31726, Toitsveld 0134 Pretoria

Mr. B. A. Young, Posbus 48, Standerton 2430

Mr. K.A. Monfort, 40 Epsom Road Stirling, East London 5241

Robert A. Young, 6675 Old Canton Road no. 2055

Mr. D.A.R. Newman, P. O. Box 6000, Cape Town 4051

Mr. W. L. Mamar, School of Sciences and Mathematics, University of Texas at Tyler, Tyler, Texas 75701, U.S.A.

Mr. D.A.R. Newman, B.P., P.O. Box 6000, Cape Town 8012

Mr. T.M. Cox, 71 Hudson Avenue Athens OHIO 45701 U.S.A.

**TAKING STOCK**

A NATIONWIDE stocktaking project has been started by the Department of Environmental Affairs to determine which areas in South Africa should be protected for all time against development.

It will produce a national atlas of such areas and establish a databank of all sensitive areas for the information of decision makers, town and regional planners, scientists and others.

Miss Liz Marron, of the Government-appointed National Committee for Nature Conservation, said the committee was responsible for submitting a national plan for nature conservation and the atlas project would be a vital part in its compilation.

One use for the atlas will be to provide overlays for regional maps so that regional planners, such as highway designers, can see immediately what to avoid.

Anybody wishing to help, supply information or suggest sites should apply to: National Plan for Nature Conservation, Private Bag X447, 0001 Pretoria.

**REPTILES & AMPHIBIANS**

FITZSIMONS' SNAKES OF SA (Bradley) 59.95

HIFIELD'S SNAKES OF SA (Pretorius) 15.95

SA FROGS (Marais & Marriott) 22.00

SNAKES OF SOUTH AFRICA (Visser) 20.00

DISCOVERIES OF A CROCODILE MAN (Posse) 19.95

REPTILES OF THE KRUGER PARK (Pentror) 7.50

FROGS OF THE KRUGER PARK (Posse) 3.50

**INSECTS**

AFRICAN INSECT LIFE (Shuttle) (Incl. Zululand) 29.95

WILLINGTON'S BUTTERFLIES OF SA (White) 25.00

MOTH OF SA (Phipps) 50.00

HANDGUIDE TO BUTTERFLIES OF AFRICA (Kloppers) 4.00

BUTTERFLIES OF SA (Germishuij 10.00

**THE CROCODILE FARMERS ASSOCIATION OF ZIMBABWE (CFAZ)**

P.O. Box 2569, Harare, Zimbabwe

There are five commercial crocodile farms in Zimbabwe. Four are situated on the shores of Lake Kariba, whilst the fifth is a well known tourist attraction at Victoria Falls. All are founder members of CFAZ under the chairmanship of J.S. Brown. The association was formed to promote the well being of the Nile crocodile through a pooling of expertise and seeks to promote a better understanding of the biological and economic importance of the reptile through tourism, education and research and to help control and monitor the trade in crocodile products.

Worldwide poaching, unchecked hunting, smuggling of skins and man's destruction of the natural habitat has resulted in all species of crocodile, caiman and alligator being listed as "seriously threatened with extinction". The commercial farmers' approach to this problem is to recognise that there is a growing demand for skins and crocodile products and it is preferable that the skins come from carefully monitored farmed crocodiles whilst attempts are made to regenerate and stabilise the wild populations. Persons wishing to know more about the aims and objectives of CFAZ should contact the Secretary at the above address.