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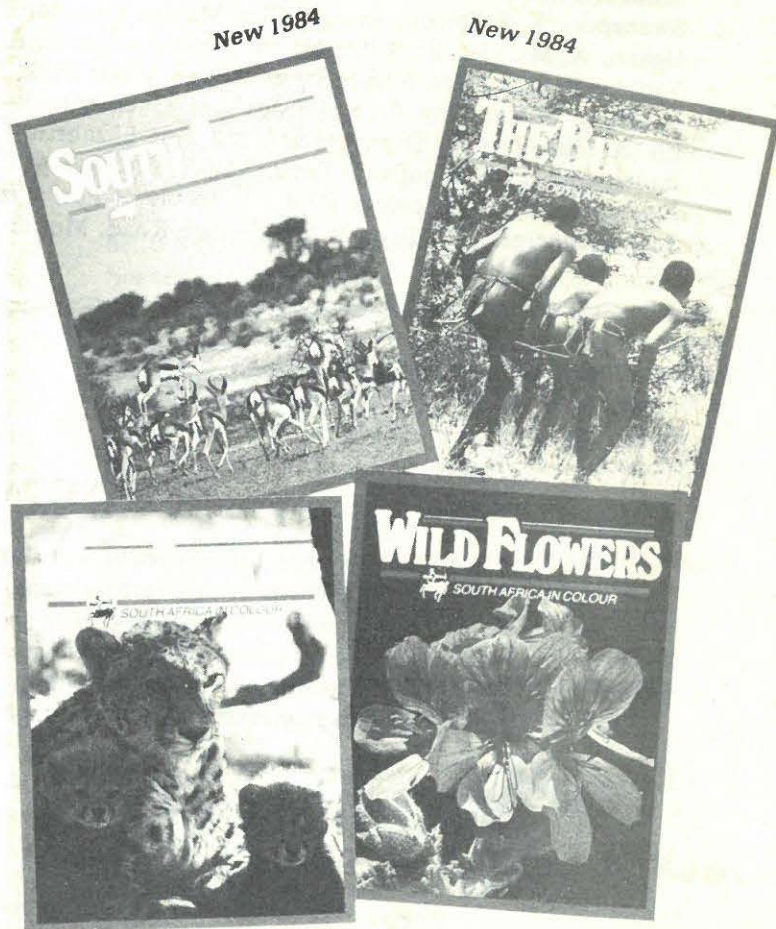
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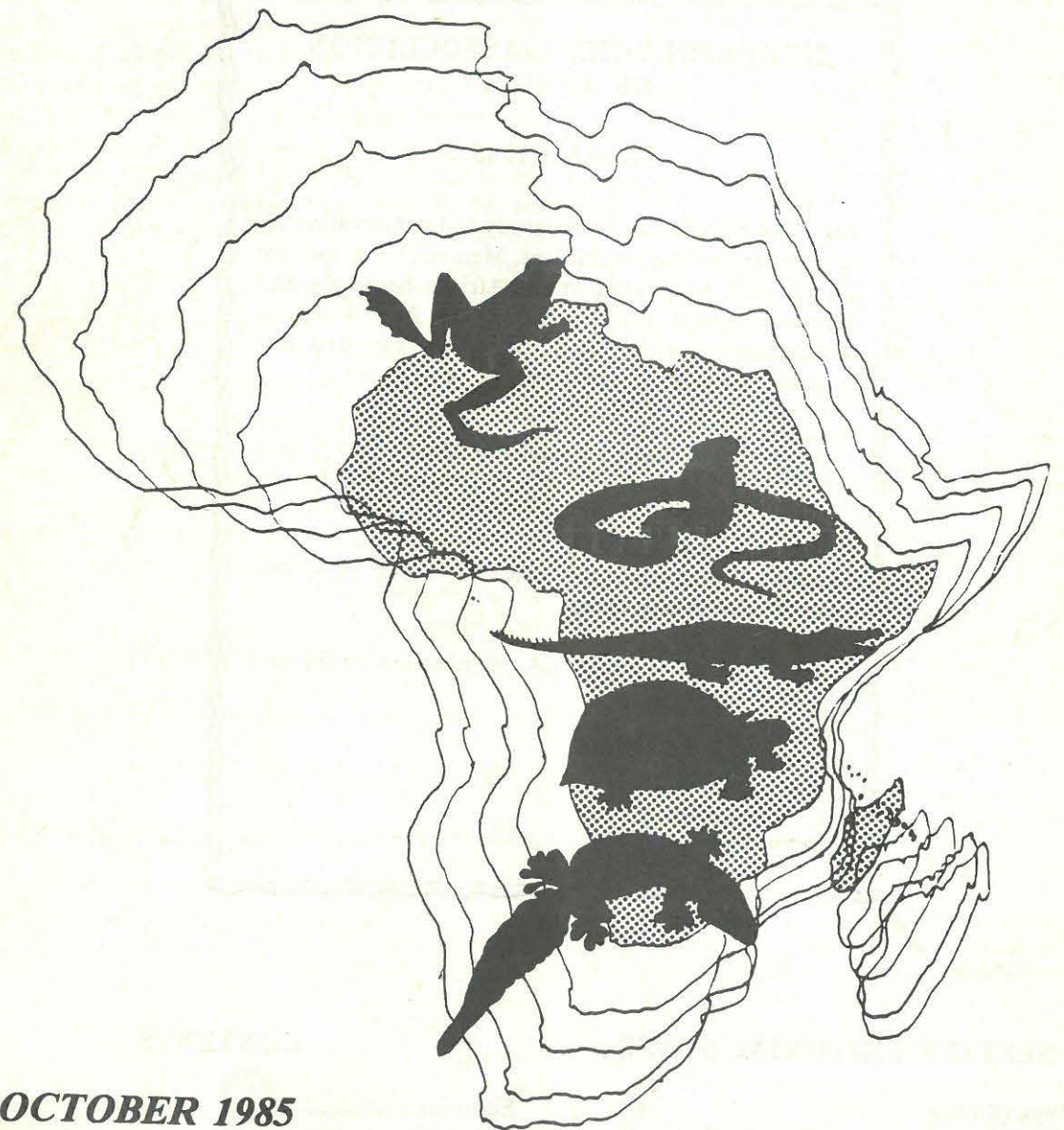
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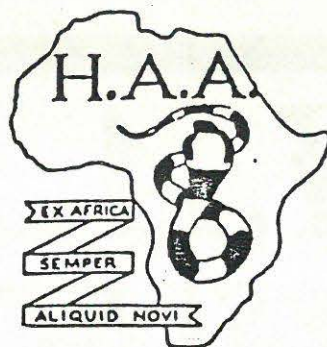
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**H.A.A.
NEWSLETTER 6**



OCTOBER 1985

Herpetological Association of Africa



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* (two issues per year) and the *H.A.A. Newsletter* (three issues per year).

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EDITORIAL

This issue will hopefully prove that we were quite serious when committing ourselves to have a newsletter in your postbox on a regular base. Now that the format seems to be established we invite members to comment and put positive suggestions to us.

The highlight of this issue will most certainly be the H.A.A. One Day Symposium held at Pietermaritzburg on 26 July 1985. The long overdue H.A.A. Meeting at times got red hot but cooled down eventually. Although the meeting only identified problems rather than solving any, I am convinced we discovered the right path to the summit. The mere fact that a committee was elected must be a milestone in the recent history of the H.A.A. Time will show how effective such a committee can operate. At the same time I want to appeal to members to hang up the axes for a while and give the new committee a chance to prove that they really are committed to a better organization. Let's always remember the words: "Good-nature and good-sense must everjoin; To err is human, to forgive, devine" Alexander Pope, 1688-1744.

One of the first tasks of the newly elected committee will be to put together a practical constitution. Hopefully this effort will be completed early next year. Another point made at the Symposium that needs attention, is what role the H.A.A. should play when it comes to recommendations concerning the conservation of reptiles and amphibians. Members are invited to put forward points that they think the committee should investigate. This is the only way the H.A.A. can solve problems and be recognized as a worthwhile association.

Remember to contribute to the H.A.A. Journal!

EDITOR



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FitzSimons' Snakes of Southern Africa

By Donald G. Broadley. 1983. 230 x 210 mm. Numerous colour plates, distribution maps, black and white illustrations; bibliography and index. Hardback. South African retail price R59,95 plus G.S.T. = R65,95. Export price US \$69,95 including postage and packing.
ISBN 0 908387 04 0

FitzSimons' Snakes of Southern Africa is the definitive study of the 160 species and subspecies of snakes known to occur in the southern African subcontinent, i.e. south of a line drawn from the Zambezi River in the east to the Kunene River in the west. When first published in 1962, *Snakes of Southern Africa* represented practically a lifetime of work by South Africa's great authority on herpetology, the late Dr Vivian F.M. FitzSimons. In the more than twenty years since then, numerous taxonomic changes have been made, including the description of twenty new forms and the relegation of ten others to synonymy, while many new locality records have helped to clarify the distributions of poorly known taxa.

Dr Donald G. Broadley, who assisted with the preparation of the first edition, has revised and updated the entire book, which now includes 117 drawings illustrating details of head scaling, 92 photographs, 83 distribution maps and 81 colour plates of original watercolours by the eminent animal artist, the late P.J. Smit. A new chapter on venom and the treatment of snakebite has been provided by Dr P.A. Christensen, consultant at the South African Institute for Medical Research. A full description of every form is provided, together with synoptic keys, bibliography, field notes and details of colour, size and distribution. The introduction provides the necessary background for the layman and the bibliography covers the relevant literature up to 1982. A general map supplements the distribution maps with geographical details and place-names.

Vivian F.M. FitzSimons (1901-1975) was one of a family of pioneers in South African herpetology. His father, F.W. FitzSimons, was an internationally renowned zoologist and established the Port Elizabeth Snake Park, the first in Africa, in 1918, while his brother, D.C. FitzSimons, was the founder and owner of the Durban Snake Park. He joined the staff of the Transvaal Museum in 1924, obtained his D.Sc. in zoology at the University of the Witwatersrand in 1942, and became Director of the Transvaal Museum in 1946. He retired in 1966 and in 1968 was awarded a D.Sc. *honoris causa* by Rhodes University.

Donald G. Broadley is Curator of Herpetology and Senior Curator of the National Museums and Monuments of Zimbabwe in Bulawayo. He obtained his M.Sc. and Ph.D. from the University of Natal in African reptiles. His major current project is *Reptiles Zambesiaca*, a taxonomic and zoogeographical study of the reptiles of Botswana, Zimbabwe, Zambia, Malawi and Moçambique.



Delta Books
Johannesburg

H.A.A.
ONE DAY SYMPOSIUM
26 JULY 1985

Department of Zoology, University of Natal,
Pietermaritzburg, South Africa.

Herpetologists who participated and the titles of their presentations were:

1st Session — Chairman Dr O. Bourquin

1. ECOLOGY OF THE SPOTTED GECKO
PACHYDACTYLUS MACULATUS IN THE
EASTERN CAPE

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

NO ABSTRACT RECEIVED.

2. A MODEL EXPLAINING CHARACTER
VARIATION AMONG POPULATIONS OF THE
GIRDLED LIZARD, *CORDYLUS CORDYLUS* IN
THE SOUTHWESTERN CAPE. P. Lef. N.
Mouton, J. Ellerman Museum, Dept. Zoology, Univ.
of Stellenbosch, Stellenbosch 7600, South Africa.

The taxonomic status of the melanistic form of *Cordylus cordylus*, often referred to as *C.c. niger*, occurring at the Cape Peninsula and Saldanha Bay, was investigated. For this purpose character variation among populations of the *C. cordylus* complex in the area south of 32° 30'S and west of 19° 30'E was analysed. Extensive fieldwork revealed the existence of several other, as yet unknown melanistic populations along the western section of the Cape Fold Mountains. Morphologically, three distinct forms of the nominate species can be recognised in the study area, namely a coastal melanistic form, a montane melanistic form and the typical form, with definite hybridization zones at areas of contact. Patterns of character variation as well as concordant patterns in other sympatric species are interpreted as showing that the melanistic forms constitute relict populations which resulted from contraction of a former large, cold-adapted melanistic population, while the typical form only at a later stage dispersed into the area through expansion of a warm-adapted eastern population. During this expansion a few melanistic populations were swamped by the ingression of the typical form, resulting in a complex pattern of geographical character variation. The melanistic forms should be considered as good subspecies of the nominate form.

3. THE ANNUAL REPRODUCTIVE CYCLE OF
THE SKINK *MABUYA CAPENSIS* IN THE
SOUTHWESTERN CAPE PROVINCE. W.J. Veith.
Dept. Zoology, Univ. of Stellenbosch, Stellenbosch
7600, South Africa.

The reproductive cycles of male and female *Mabuya capensis* are described. Male G.S.I. reaches a peak during the winter months (June, July) and in females yolked ovarian follicles appear in September with ovulation commencing during October thus suggesting different environmental reproductive cues for the two sexes. Abdominal fatbodies in both sexes are deposited prior to the winter, but males utilize fat reserves more rapidly than females probably due to the onset of vitellogenesis commencing after completion of male spermatogenesis. High cholesterol levels in males correlated with increased liver index, suggesting synthesis of cholesterol by the liver rather than release from fatbodies. Seasonal variation in liver index in females show two peaks during the reproductive cycle, the first correlating with the onset of vitellogenesis and the second possibly with fat deposition in the fatbodies. Vitellogenesis was electrophoretically shown to commence at the end of July. Of the four plasma protein fractions separated, fraction 1 (human to mobility) increased during vitellogenesis with compensatory decrease in fraction 4 (mobility exceeding human albumin).

4. THE USE OF HAIR IDENTIFICATION IN
DETERMINING THE FEEDING ECOLOGY OF
SOUTH AFRICAN SNAKES. R.M. Douglas and J.H.
van Wyk. Department of Herpetology, National
Museum, Bloemfontein, 9300.

The identification of mammalian species by characteristics of their hair in predator diet analysis is a widely used procedure. *Psammophylax R. rhombeatus* was used in a trail study to investigate the practical application of procedures used by other workers. A total of 94 specimens were examined and hair identifications were made by comparing gelatine imprints of the unknown samples with that of a reference collection. Of the 63 samples removed from the 25 specimens which contained hair samples, only 5 samples were not identified to either family or genus level.

2nd Session — Chairman Mr N. Jacobsen

1. THE DIET OF THE RHOMBIC SKAAPSTEKER,
PSAMMOPHYLAX R. RHOMBEATUS: A
PRELIMINARY STUDY. J.H. van Wyk and R.
Douglas. Department of Herpetology, National
Museum, Bloemfontein, 9300.

This is the first detailed account of the diet of *Psammophylax r. rhombeatus*. A total of 94 museum specimens originally collected from the Orange Free State, were studied. 59% of the dissected snakes

contained prey items. Identification of prey species was based on hair morphology (mammals) and the presence of scales and other body remains (reptiles, amphibians and insects). Mammalian hair was collected from 45% of the snakes containing prey items, 12,7% containing lizard scales, 3,6% amphibian remains and 47,2% insects. The diet of this snake is discussed in relation to its distribution and that of the dominant prey species.

2. SUMMER AND WINTER BREEDING OF FROGS
IN NAMAQUALAND. A. Channing, Dept.
Biochemistry, Univ. Western Cape, P/Bag X17, Bellville,
7530, South Africa.

Namaqualand is an extremely arid area situated on the west coast of southern Africa. Despite the poor rainfall, nine species of frogs are found there. The area is devoid of permanent rivers (although it is bounded to the north by the Orange river), but 'springs, wells and farm dams provide a habitat for "rivier" frogs. The scant rain falls during summer and winter, and the same temporary ponds may fill twice in a year. Two sets of frogs utilize these temporary ponds — one set breeding in summer and the other in winter. One species of *Breviceps* breeds in coastal sand dunes where mist is common although rain may not fall for years.

3. SURVIVAL ABILITIES OF TWO SYMPATRIC
XENOPUS SPECIES (*X. LAEVIS* AND *X. GILLI*) IN
LOW pH 'BLACKWATER'. M.D. Picker, Dept. of
Zoology, Univ. of Cape Town, Rondebosch 7700,
R.S.A..

Xenopus gilli and *X. laevis* hybridise in the Cape of Good Hope Nature Reserve. Here *X. laevis* occupies disturbed habitats, and *X. gilli* undisturbed low pH blackwater ponds. Hybrids are found in ponds of intermediate water quality. The embryos and larvae of both species exhibit differential survival in tap water and black water of varying pH. *X. gilli* tolerates pH's in black water as low as 3.5, and *X. laevis* 4.5. The effect of humic compounds per se on embryonic survival is also examined. The difference in survival abilities of the larvae is not shown by newly metamorphosed frogs.

4. *HYPEROLIUS ARGUS (ANURA) IN NATAL*:
PROBLEMS IN TAXONOMY AND CONSER-
VATION. J.C. Poynton. Dept. Biological Sciences,
Univ. Natal, Durban 4001, South Africa.

A high degree of variation in the colour pattern of *H. argus* Peters, including sexual dichromatism and a marked cline, has led to much taxonomic confusion. This East African species extends down the Natal coastal lowlands as far south as Durban. It has been assigned to *H. puncticulatus* (Pfeffer) in Natal. In a discussion of Mozambique and Natal material, this assignation is shown to be incorrect. The probable holotype of Cope's

cinctiventris is considered to be a synonym of *argus*. There is some evidence that populations of *argus* intergrade with *semidiscus* Hewitt in Natal, and the occurrence of *semidiscus* on the periphery of the *argus* range is discussed in relation to the "central-marginal" model of biogeographical patterning. It has not been possible to determine the relative vulnerability to habitat disturbance of *argus* compared to any other amphibian species, but the conservation prospects of this species at the southern end of its range currently seem extremely poor.

H.A.A MEETING
(Chairman Dr E. van Dijk)

3rd Session — Chairman Dr W. Branch

1. DESCRIPTIONS OF *HELEOPHRYNE*
TADPOLES FROM THE CAPE PROVINCE. A.
Channing & Richard Boycott*. Dept. Biochemistry,
Univ. Western Cape, P/Bag X17, Bellville, 7530, South
Africa. *Transvaal Snake Park, P.O. Box 97, Halfway
house, 1658, South Africa.

Three species of *Heleophryne* are found on the mountains of the southern and south-western Cape. We describe samples representing all the known localities where the genus occurs (excluding *H. natalensis* which is found from Natal northwards). We recorded standard morphometrics, nostril morphology, internal buccal anatomy, pigmentation patterns and breeding dates. The variations in these features is presented to show the differentiation between populations occurring on isolated mountains. These differences may be sufficient to permit identification of some tadpoles at a population level. We offer a key to the tadpoles of the four species of *Heleophryne*.

2. COMMENTS ON FANG-LIKE STRUCTURES IN
EARLY TADPOLES OF *HELEOPHRYNE*. J. Visser,
P.O. Box 20, Camps Bay, 8040, South Africa.

Abstract: Two very different dental patterns are exhibited during the larval life of two southern species of *Heleophryne*. All other known anuran tadpoles develop one type of dentition during their larval ontogeny which is in large measure species specific. The early dentition of the Cape *Heleophryne* comprise single upper and lower, individually socketed, fang-like teeth which are lost soon after their emergence and not replace. It is postulated that the absence of beaks in these tadpoles is correlated with their highly developed suctorial mouths. Evidence is

presented to show that various degrees of beak reduction and less show a strong correlation with oral and other suctorial specialisations. It is concluded that the fang-like teeth of the young larvae of the Cape species are a derivation of the primitive beaked state.

3. STATUS OF HELEOPHRYNE ROSEI HEWITT (ANURA, LEPTODACTYLIDAE) ON TABLE MOUNTAIN AND RECOMMENDATION FOR ITS CONSERVATION. R. Boycott, Transvaal Snake Park, Halfway House. A. de Villiers, Jonkershoek Nature Conservation Station, Stellenbosch.

4. MICROCOMPUTER MAPING AND MANIPULATION OF SOUTHERN AFRICAN ANURAN DISTRIBUTION DATA. D.E. van Dijk, Dept. Zoology, Univ. Natal, Pietermaritzburg, 3200 & J. van Dijk, Dept. Computer Science, University of Stellenbosch, Stellenbosch, 7600.

A microcomputer such as an Apple IIe (or IIplus) has been found to have sufficient capacity in terms of display detail, memory and processing speed, to permit recording, display and comparison of anuran distributions of 8°E to 43°E X 15°S to 35°S (Southern Africa south of the Kunene and Zambesi Rivers) to 1/8 of a degree using a 280 wide X 160 high matrix. A convenient map for determining 1/8 or 1/4th degree coordinates for plotting features such as the coastline and rivers is the "Temperature Diagram" of the Weather Bureau publication WB 28, a 1: 2 500 000 Behrmann's Equal-Area Cylindrical projection which has parallel and straight lines of longitude and latitude. Programmes have been written for conversion of map coordinates to screen coordinates, for plotting screen coordinates and for adding text to the screen. Backgrounds such as the coastline, and distributions of individual taxa, are stored in a form which permits faster writing to the screen than occurs with the original plotting. Methods are being worked out for enlarging, for highlighting overlaps of distributions with one another or environmental parameters, and for making read-outs of statistics, e.g. probabilities of distribution/parameter correlation. Use of the micro as an intelligent terminal for use with main-frame computers, e.g. for map plotting with Albers projection, and the use of smaller computers than the Apple are being investigated.

5. LITERATURE ON AFRICAN ANURA — A COMPILATION AND BIBLIOGRAPHY. D.E. van Dijk, Dept. Zoology, University of Natal, Pietermaritzburg, 3200.

A systematic study of southern African tadpoles published in 1966 (Ann. Natal. Mus. 18: 231-286) included a review of the literature on the same genera elsewhere in Africa. For this purpose a collection of literature was made in Göttingen, West Germany, in 1965. This collection has been expanded to cover all

traceable references to Anura of Africa, Arabia and southern Israel, and the islands with African affinities (Madagascar, Seychelles, Mauritius, Canaries, etc.). More than 4 000 items have been obtained, catalogued, and analysed for taxa mentioned and references given. References if already available are checked for accuracy and new ones are traced. Preliminary records of each item are being stored as text-files on a microcomputer so as to permit single-line (80 character width) printouts. Computer searching under author, date, journal or monograph reference, taxa, and region and type of study, is possible from the short references. A full-reference bibliography and comprehensive computer search system is planned for the future.

H.A.A. MEETING CONTINUED END OF SYMPOSIUM

Dr. E. van Dijk, Department of Zoology University of Natal, Pietermaritzburg, organized the symposium.

ACKNOWLEDGEMENTS

The H.A.A. would like to thank: The Z.S.S.A. for inviting the H.A.A. to use the same venue in conjunction with the Z.S.S.A. symposium. Dr. E. van Dijk for going to all the trouble organizing the H.A.A. One Day Symposium.

The Department of Zoology, University of Natal for the use of their facilities.

The speakers at the symposium, for presenting interesting research papers.

The H.A.A. Members making the effort to attend.

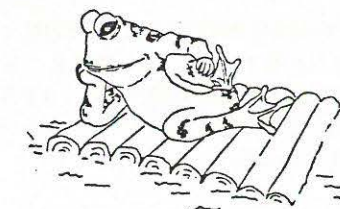
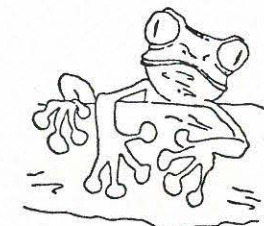
Dr. E. van Dijk and his wife for the lovely supper and warm hospitality after the symposium.

J.H. VAN WYK & R. DOUGLAS

IT'S HIGH NOON IN THE CROAK GULCH

Conservationists in the Western Cape have stepped in to stop a macabre bout of "frog wars" which threaten the survival of the Cape platanna, SA's rarest frog.

Our Living World, June 2 1985



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HOW TO KILL AN ENTERPRISE

- Don't go to meetings.
- If you go, arrive late.
- Criticize the work of the organizers and members.
- Get mad if you are not a member of the committee, but if you are, make no suggestions.
- If the chair asks an opinion on a subject, say you have none. After the meeting say you have learned nothing, or tell everyone what should have happened.
- Don't do what has to be done yourself, but when the members roll up their sleeves and do their best, complain that the group is run by a bunch of egotrippers.
- Pay your dues as late as possible.
- Never think of introducing new members.
- Complain that nothing is ever published which interests you but never offer to write an article, make a suggestion, or find a writer.

And if the enterprise dies, say you saw it coming ages before.



HERPETOLOGICAL PAPERS READ AT THE Z.S.S.A. SYMPOSIUM

23-25 JULY 1985

1. LIZARD COMMUNITIES OF THE CENTRAL NAMIB DESERT AND THE KHOMAS HOCHLAND (SOUTH WEST AFRICA): A Comparison. A.E. Berger-Dellmour, State Museum, Windhoek, 9000, South West Africa.

Lizard communities around Rössing (Namib) and Windhoek (Khomas Hochland) have been censused and a project designed to compare the ecology of species within one area and the two regions with each other. Both areas reach from 22° 15' to 22° 45' south. Their east-west range is 14° 45' to 15° 20' east (Rössing) and 16° 45' to 17° 20' east (Windhoek). With a potential evaporation of 9x j (Windhoek) to 45x (Rössing) average rainfall, both regions provide highly arid environments. The climate is that of a true desert (R) and a semi-desert (W) with summer rainfalls and average temperatures of about 20° (R) and 18° (W) Celsius. Elevation above sea level is 250-1275 m (Rössing) and 1350-2480 (Windhoek). The Namib study area consists of gravel plains with scattered inselbergs and low to medium high mountains, while the Khomas Hochland shows low to high mountains with isolated, partially sandy, plains. Sandy riverbeds with ground water close to the surface are found in both areas. Temperatures are usually slightly warmer in the desert, and there are less pronounced day/night and summer winter differences than in the Khomas Hochland. The Rössing study area receives between 50 and 100 mm rainfall per year with some precipitation by fog, while the Windhoek area receives 300 to 400 mm, practically no fog. Reliability of rainfall is twice as high in Windhoek as it is at Rössing.

Twenty-two species of lizards were found around Windhoek. Fourteen of them are abundant, another ten might occur, according to literature. At Rössing, 13 dominant species out of 23 are found and another 5 possibly occur. Most lizard families show a higher variety of species in the Khomas Hochland and three of them are excluded from the Namib study area. The geckos, however, are represented by more species in the Namib with three members of the genus *Rhoptropus* being diurnal and thus possibly "replacing" other lizards of wetter areas.

An intensive long-term study is being carried out checking activity, size, thermoregulation, food preference patterns and various other measurements against a many ecological parameters as possible. This paper will deal with basic composition of lizard communities and highlight a few special questions that have shown up during the first year of the project.

2. EFFECTS OF SPECIES REMOVAL ON HABITAT-USE PATTERNS OF A NORTH AMERICAN DESERT LIZARD ASSEMBLAGE. R.D. Pietruszka, Desert Ecological Research Unit, P.O. Box 1592, Swakopmund, 9000, South West Africa.

Between 1978 and 1981 the patterns of habitat use in members of a core group of species inhabiting North American deserts (*Gambelia wislizeni*, *Cnemidophorus tigris*, *Phrynosoma platyrhinos*, *Callisaurus draconoides* and *Uta stansburiana*) were investigated through detailed behavioural observations and experimental manipulations. In 1980 and 1981, 2 of the 5 species were removed from 4 of the 6 plots in an attempt to determine the importance of biotic interactions in shaping habitat-use patterns.

In response to the manipulations I expected to see alterations in habitat use among species remaining on plots after removals. In 1980 the removal density of species targeted for removal ranged between 1,1 and 11,1 lizards/ha. Removal densities in 1981 ranged from 0,3 - 3,7 lizards/ha representing a decrease in the densities of target species of from 69-75% between 1980 and 1981. While statistically significant differences in habitat use were apparent for several species between control and experimental plots, these shifts appeared to be more a function of habitat heterogeneity between plots than a direct result of species removals. Overall, there were no alterations in habitat-use patterns that could be directly linked to species removals.

3. HYBRIDIZATION AND HABITAT SELECTION IN *XENOPUS GILLI* AND *XENOPUS LAEVIS* IN THE SOUTHWESTERN CAPE PROVINCE. M.D. Picker, Zoology Department, University of Cape Town, Rondebosch, 7700, South Africa.

Xenopus gilli, and endangered amphibian, has its largest population in the Cape of Good Hope Nature Reserve. *Xenopus laevis* is widespread in the S-W Cape and sympatric with *X. gilli* over the latter's range. *X. gilli* typically occupies so called black-water sponges - ponds of low acidity and high phenolic levels. Hybrids between the two species were found in 50% of the waterbodies in the reserve, with only 21% of the ponds supporting populations of *X. gilli* alone. Each category of frog occupied ponds of significantly different pH, with *X. gilli* and *X. laevis* occupying ponds of significantly different water colour. *X. gilli* were never found in disturbed ponds. Interpond migration occurred during the winter months, but did not result in mixing of pure *X. gilli* and *X. laevis* populations occupying ponds 1 km apart. Apparently the two species select habitat based on water quality, with *X.gilli* choosing acid 'black-waters' characteristic of the fynbos biome. Hybrids are apparently produced when *X. laevis* penetrates *X. gilli* ponds having slightly elevated pH and reduced phenolic levels.

4. FEEDING STRATEGIES OF LARVAE OF SYMPATRIC SPECIES OF *XENOPUS* IN THE SOUTHWESTERN CAPE. A. Channing and M.P. Simmonds*, Department of Biochemistry, University of the Western Cape, Private Bag X17, Bellville, 7530, South Africa.*School of Biological Sciences, Queen Mary College, Mile End Road, London E1 4NS, England.

Sympatric populations of *Xenopus laevis* and *Xenopus gilli* occur in the Cape of Good Hope Nature Reserve. We sampled the gut contents of larvae of both species and found that while both take large quantities of plankton, *Xenopus gilli* also ingests macrophytic debris like epidermis and pollen. Although *X. laevis* is believed to be displacing *X. gilli*, and hybrids are known from the area, the winter breeding habit of *X. gilli* seems to give it an advantage in utilizing temporary pools. *X. laevis* is able to breed later in the year in man-made permanent bodies of water.

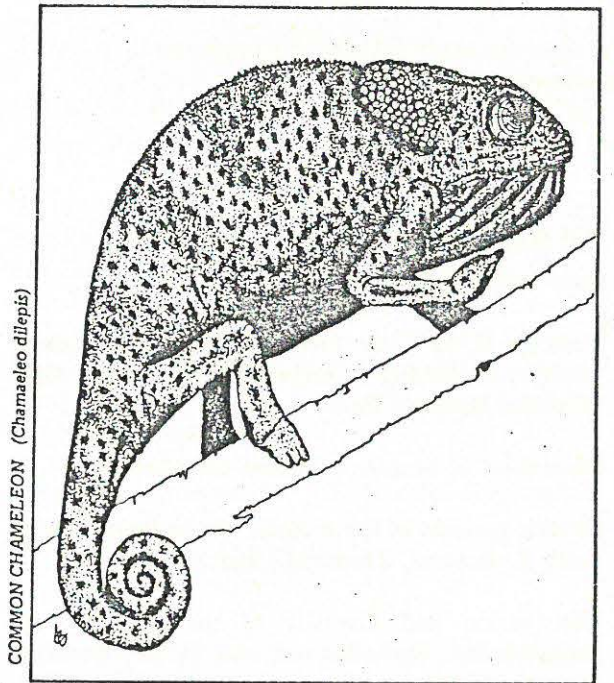
5. INTRASPECIFIC COMPETITION FOR SPACE AMONG CALLING FROGS. P. Bishop and N.I. Passmore, Department of Zoology, University of the Witwatersrand, Johannesburg, 2001, South Africa.

The distribution of calling male frogs has been shown by many authors to be non-random. It has also been demonstrated that this spatial distribution is maintained by aggressive vocalizations and physical combat. Many species of frogs organize their calls temporally so that vocalizations of one individual do not overlap those of another. This results in call alternation. In previous experiments with *Hyperolius marmoratus* we have shown that the initiation of aggressive calls is related to the sound pressure level of the broadcast. Spacing of males is therefore vocally mediated. We tested whether the widespread occurrence of call alternation was related to the equally widespread phenomenon of male spacing by studying evoked vocalizations, and their temporal pattern in field broadcast experiments using *H. marmoratus*. We found that the evoked response of the subject differed with respect to the temporal position of the broadcast call. If the broadcast call coincided with the subject's call then the subject's calling pattern was unaltered. However when the broadcast call was randomly positioned with respect to the subject's call the following responses were observed.

1. Males immediately reestablished an antiphonal pattern with the broadcast call.
2. As the broadcast call level was increased mating calls were replaced by aggressive calls.

We show that temporal organization of the calls is a prerequisite for spacing and that spacing breaks down when calls of neighbouring males are synchronous.

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NEW GECKO

A hitherto unknown species of gecko has been discovered in the Hawekwa Mountains near Du Toitskloof in the Cape, by two researchers from the Department of Zoology at the University of Stellenbosch.

Mr Le Fras Mouton and Mr Dawie Mostert say the gecko belongs to the genus *Alfroedura* found only in Southern Africa. The newly-discovered species will probably be named *Alfroedura hawequensis*.

The gecko is larger than other species of the genus, reaching about 14 cm in length. It has a prominent, broad, flat tail.

Die Burger, April 14

INSTITUTIONAL NEWS



Department of Herpetology,

Port Elizabeth Museum

Dr Bill Branch reports:

Current herpetological projects

1. Ecology of E. Cape tortoises, including resource partitioning among 3 sympatric species in the Addo Elephant National Park.
2. Biometrics of Southern African tortoises.
3. Generic revision of the tortoise genus *Psammobates* (with R. Boycott, Transvaal Snake Park).
4. Distribution and diversity of the Eastern Cape herpetofauna, including surveys of the Southern National Parks.
5. Familial relationships of African snakes.
6. Distribution and status of Namibian pythons (with M. Griffith, Dept. Nature Conservation, S.W.A.).

News

1. The herpetology department is to be housed in the new extension to the Port Elizabeth Museum, and will include two offices, a research laboratory, and a new, large wet store.
2. Consolidation of Cape Provincial Museum herpetological collections. The Herpetological collection of the Kaffrarian Museum (King Williamstown), Albany Museum (Grahamstown) and Cape Department of Nature Conservation (Jonkershoek) are to be incorporated/housed in the new herpetological section in the Port Elizabeth Museum extensions.
3. I have recently been invited (along with John Greig) to act as a regional co-ordinator for Africa for the IUCN Species Survival Commission - Tortoise Group. African herpetologists studying tortoises are invited to contact either John Greig or myself, to co-operate in information gathering and dissemination.

Recent publications:

BRANCH, W.R. 1984. Cape Lizards, VI. Songs in the Night. *Naturalist* 28(1): 3-11.

BRANCH, W.R. 1984. Cape Lizards. VII. Plated and Girdled Lizards.

BRANCH, W.R. 1983. The Dwarf Angolan Python, *Python anchietae*: An endangered species. *Litt. Serp.* 3(4): 121-125.

BRANCH, W.R. 1984. (Book Review) "FitzSimons' Snakes of Southern Africa." By D.G. Broadley, Delta Books, Johannesburg, 1983, 376pp. In *Afr. Wildlife* 38(5): 211.

BRANCH, W.R. 1984. (Review) "Transvaal Snake Poster" By N. Jacobsen, R. Newbery and T. du Plessis, Transvaal Wildlife Society, 1983. In *Afr. Wildlife* 38(5): 213.

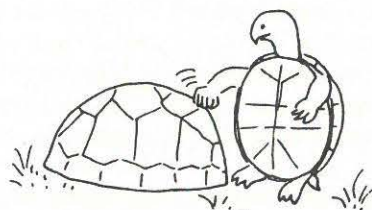
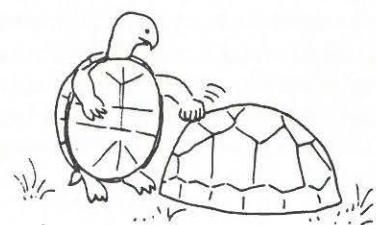
BRANCH, W.R. 1984. Herpetology in Africa. *Herp. Review* 15(3): 66.

BRANCH, W.R. 1984. Preliminary Observations on the ecology of the angulate tortoise *Chersina angulata* in the Eastern Cape Province, South Africa. *Amphibia-Reptilia* 5(1): 43-55.

BRANCH, W.R., 1984. Pythons and People: Predators and Prey. *Afr. Wildlife* 38(6): 236-241.

BRANCH, W.R. & BROADLEY, D.G. 1984. Suppression of the generic name *Thermophilus* (Reptilia: Sauria). *Bull. Zool. Nomenclature* 42: 89-90.

BRANCH, W.R. 1984. The House snakes of southern Africa Genus *Lamprophis*. *Litt. Serp.*, 4(3-4): 106-120.



Department of Zoology
University of Port Elizabeth

Miss Shaleen Els reports:

At present only two projects are being undertaken, one on tortoises and one on turtles.

Mrs. G. McDonald is doing her M.Sc. on *Caretta caretta*. She is studying aspects of their osmoregulation, and is at present looking at effects of long term exposure to different salinities on osmoregulation and blood composition.

I am investigating the ecophysiology of *Chersina angulata*, with particular reference to thermoregulation. Use is made of radio transmitters and ECG recordings to determine the response of the tortoises to various environmental conditions.



Department of Zoology,
University of Witwatersrand
Prof. N. Passmore reports:

Communication Biology Research Group

1. Discrimination of frequency-modulated sounds by the frog *Kassina senegalensis*

Passmore, N.I., Capranica, R.R., Harned, G.D.

Male *Kassina senegalensis* produce a pronounced frequency-modulated mating call which serves to attract conspecific females. The call sweeps upward from 750 to 2250 Hz in 140 ms. Results from 475 two-choice playback discrimination trials verify that females readily discriminate among a variety of FM signals based on sweep direction, duration, rate and frequency range. Concomitant electrophysiological results indicate that these animals afford an opportune model for neurobehavioral studies of encoding of FM sounds in the vertebrate peripheral and central auditory system (STATUS: ongoing).

2. Accuracy of phonotaxis in *Kassina senegalensis*

Passmore, N.I., Capranica, R.R.

The ability of small vertebrates to localize a sound source in the environment is poorly understood. We have studied the phonotactic accuracy of female *K. senegalensis* using one and two stimulus presentations and a variety of natural and synthetic calls (STATUS: ongoing).

3. Accuracy of phonotaxis in *Hyperolius marmoratus*

Passmore, N.I., Capranica, R.R., Telford, S.R., Bishop, P.J.

We have studied the three-dimensional accuracy of phonotaxis by female *H. marmoratus* in response to broadcast natural calls. Females readily resolve the sound source elevation and proceed towards the target by negotiating a series of elevated perches. Extensive use appears to be made of visual cues, and this aspect of the study is currently being extended (STATUS: ongoing).

4. Frequency preferences of female *Hyperolius marmoratus*

Passmore, N.I., Telford, S.R.

We have shown (1) the female *H. marmoratus* show a marked preference for the lower frequency member of each pair of synthetic acoustic stimuli presented in 2-choice experiments, (2) that reduction in the broadcast level of the favoured stimulus removes or reverses this preference. These results support the notion that the choices made by females are merely the result of passive attraction and not active female choice. This finding is supported by data from natural populations which indicate that male body size has no effect on mating success. The possibility that the complexity of the acoustic environment affects choices made by females is currently being investigated (STATUS: ongoing).

5. Call level preferences of female *Hyperolius marmoratus*

Bishop, P.J., Passmore, N.I.

We conducted two-choice call discrimination experiments to determine whether females respond preferentially to the closest male (i.e. the louder of the 2 stimuli). Females showed a significant preference for the louder of two calls differing by 3dB. We also simulated a more natural situation in which females were given the choice of 4 loudspeakers. In this more complex acoustical situation, a preference for the louder call was only displayed when the difference in level was at least 12 dB (STATUS: complete).

6. Social interactions in Reed Frogs - A Cage Study

Dyson, M.L., Passmore, N.I.

This is a study of social interactions between captive males. The effect of chorus density on male behaviour is being studied, and an attempt is being made to relate individual variation to variation in male mating success (STATUS: ongoing.)

7. Aspects of reproductive behaviour in leaf-folding frogs

Backwell, P.R.Y., Passmore, N.I.

A detailed study of breeding and nest-building behaviour has been initiated. The functions of the different call components are being examined experimentally. The rare occurrence of polyandry is also being studied.

8. Accuracy of phonotaxis in response to different synthetic stimuli in *H. marmoratus*

Wilson, N., Passmore, N.I.

Stimuli differing in sweep direction, extent of frequency sweep, duration, and repetition rate are presented to females. Comparison of phonotactic accuracy in response to these stimuli suggests that these differences in the stimuli do not affect the ability of females to localize the sound source (STATUS: ongoing).

Recent publications:

PASSMORE, N.I. The relevance of the Specific Mate Recognition Concept to anuran reproductive biology. *Monitore Zoologico Italiano*, 15(6), 93-108, 1981.

TELFORD, S.R. & PASSMORE, N.I. Selective phonotaxis of four sympatric species of frogs (genus: *Hyperolius*). *Herpetologica*, 37(1), 29-32, 1981.

PASSMORE, N.I. Sound levels of mating calls of some African frogs *Herpetologica* 37 (3), 166-171, 1981.

PASSMORE, N.I. & TELFORD, S.R. The effect of chorus organization on mate localization in the Painted Reed Frog (*Hyperolius marmoratus*). *Behav. Ecol. Sociobiol.* 9, 291-293, 1981.

PASSMORE, N.I. & TELFORD, S.R. Random mating by size and age of males in the Painted Reed Frog, *Hyperolius marmoratus*. *S. Afr. J. Sci.*, 79, 353-355, 1983.

PASSMORE, N.I., CAPRANICA, R.R., TELFORD, S.R. & BISHOP, P.J. Phonotaxis in the Painted Reed Frog (*Hyperolius marmoratus*). The localization of elevated sound sources. *J. Comp. Physiol. A.* 154, 189-197, 1984.

CAPRANICA, R.R., PASSMORE, N.I., TELFORD, S.R. & BISHOP, P.J. Accuracy of sound localization by the frog *Hyperolius marmoratus*. *J. Acoust. Soc. Am. Suppl.* 1, 75, 588, 1984.

CAPRANICA, R.R., HARNED, G.D. & PASSMORE, N.I. Discrimination of frequency modulated sounds by the frog *Kassina senegalensis*. *J. Acoust. Soc. Am. Suppl.* 1, 75, 528, 1984.

PASSMORE, N.I. Acoustic signalling in Reed Frogs. *Scientific Progress* 16(3), 3, 1983.

PASSMORE, N.I. High nocturnal body temperature in the Painted Reed Frog (*Hyperolius marmoratus*). *Herpetologica*, 41, 212, 1985.

Department of Zoology
University of Pretoria
Prof. J.D. Skinner reports:

There is only one herpetological project: Proceeding from the results of Mark Ferguson, who described temperature dependant sex-determination (TSD) in the Mississippi alligator (*J. Anat.* 134(5): 619-621), a German guest student, Mr Jurgen Fiedler is working on breeding conditions, sex ratios, embryonic development and the biological significance of TSD in the Nile crocodile.

The project is being carried out with the cooperation of several crocodile farmers in South Africa, the National and Natal Parks Board and the National Zoological Gardens of Pretoria, under my supervision. Unfortunately funding for the project is limited and we are dependant on every possible assistance by persons engaged in crocodile research.

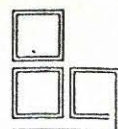
One of the first results will be a report of the situation and status of crocodile farming.

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Publications

1983 — Der Übergang von Echse zu Scheiche in der Gattung *Tetradactylus* *Zool. Jb. Anat.* 110, pp. 1-152.
1985 — The lizard Genus *Tetradactylus*: A Model Case of an Evolutionary Process. *Proc. Int. Symp. Afr. Vertebr.* 1984.

The Livingstone Museum,
Livingstone, Republic of Zambia
Dr M.P. Simbotwe reports:

Not much is happening here at present. But work on reptiles and frogs of Kafue National Park and the Lower Zambezi National Park is planned for late in the year. At present the Natural History collection which includes 2,500 herps is being worked on to improve preservation and cataloguing.

PATIENT WAIT FOR A SCALY ESCAPE

By Eugene Abrahams

A game park owner is playing a dangerous hide-and-seek game with his two-metre crocodile which went missing last week from its cage. The crocodile, affectionately name "Ouman", escaped from the Safariland Game Park in Paarl, Cape. After a full-scale search by police and the owner of the park it was tracked down to a dam a kilometre away. On Wednesday night the hungry crocodile made its first appearance and snatched a dead chicken which had been left as bait in a cage. But before the owner, Mr. A. van Wyk, could close the cage, Ouman had returned into the dam's murky depths.

Waited

The cage is placed on a sandy bank, the most likely place where the crocodile might show itself. For nine days Mr. van Wyk and a labourer have waited from early dawn to late at night for the crocodile to show himself. Mr. van Wyk has asked curious bystanders not to come to the dam as they might disturb the crocodile and force him to stay hidden. Nine years ago another crocodile, named "George", made its way to the Berg River after being spotted near the Victor Verster Prison. Eventually a crocodile was trapped in the river, but experts said he was not George. The real George was never seen again.

Sunday Times, April 21, 1985

State Museum,
Windhoek,
SWA/Namibia
Dr H. Berger-Dell'mour reports:

I started working as Curator/Lower Vertebrates on the 1st of July 1983. The first year or so, I had to get acquainted with the duties of a Museum Curator and with the local herpetofauna. I attempted to reidentify and recatalogue the reptile collection, finishing off most of the lizard families. This project will be carried on as soon as a full time assistant is available.

In Feb. 1985, the biologists of the State Museum started a joint project at the Rössing Uranium mine, originally designed as an impact study, but finally being rather a pilot study of species composition and their basic ecology. Since then, I have been in the central Pronamib around the lower Khan river on a regular basis (one week out of four).

My activities there included pitfall trapping and grab-sampling. At a later stage I started to measure body-substrate- and air-temperatures with all specimens. Body-measurements and stomach content analyses will follow. A similar project was started in Windhoek in early 1985. It includes a capture-release program of lizards in a selected area.

In Rössing, I found a local population of "Eremias" to be well differentiated from its sibling species. Together with a colleague in Vienna (Dr. W. Mayer) the specific status was confirmed. There is a bit of hybridisation, but no primary hybrids were ever found and transgression occurs in only 2 of the 3 differential diagnostic genes. The border area is extremely sharp, in one particular well documented case, both species are only found together in a strip of about 1 km.

This new species is presently being described and its parapatric coexistence with the sibling species discussed as well as its overall distribution in the lower Khan & Swakop area documented.

A similar project was launched recently at the Waterberg, where apparently "*Eremias undata rubens*" and "*Eremias u. undata*" occur in sympatry or parapatry (according to Wulf Haacke).

Symposia

July 1983 — ZSSA Symposium on arid environments; Swakopmund (visitor)

May 1984 — Int. Symposium on African Vertebrates; BONN (FRG) (Paper)

July 1985 — ZSSA Symposium on Competition & Coexistence; Pietermaritzburg. (Paper)

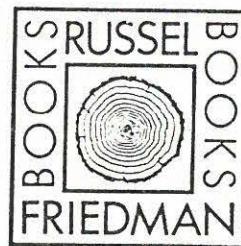
SNAKE VERSUS MAN

JOHAN
MARAIS

The descriptions in this book cover all 23 species of potentially dangerous snakes found in southern Africa, as well as 16 harmless species that are either easily confused with dangerous snakes, or very common. Information on each species includes descriptions, distribution, field notes and details of venom. The colour section of 62 photographs has been arranged for quick identification of species that are easily confused.

Of tremendous value to the layman is the first-aid section, which will be new to most people but describes a very simple and effective method of treating snake bite.

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SUNDAY TIMES LifeStyle, October 13, 1985

JOHAN MARAIS looks like a successful business executive. But what he carries in his leather briefcase isn't a draft of next year's budget — it's a lot more deadly.

When he arrived at my desk he smiled disarmingly and then, with the nonchalant air of a conjuror pulling a rabbit out of a hat, opened the case to reveal two white linen bags — from one came an ominous hissing noise; the occupant of the other lay quietly.

BY BERYL ROBERTS

sive of its kind.

And, as he was frequently asked to lecture to clubs and societies, he found he needed a slide collection to illustrate his talks.

This meant taking his own photographs and he soon became an expert at this aspect of his work too.

In 1982 he attended the World Crocodile Conference in Zimbabwe, and invitations followed to lecture in Europe and the United States. Though this meant resigning from the snake park, he thought the experience could not be missed.

Ignorance

When he returned home he decided to write the book which he had felt for some time was badly needed.

"Most people are ignorant about snakes and their habits," he said. "It's assumed that every snake is dangerous ... but this is not the case at all."

Of the 160-odd species and subspecies of snakes in Southern Africa, there are only 16 thought to be deadly to man, and even a nasty encounter with one of these can be survived if one knows the correct first-aid procedure to follow.

Johan knows only too well — he's had three spells in intensive care after bites by poisonous snakes.

In his book — "Snake Versus Man: A Guide To Dangerous And Common Harmless Snakes of Southern Africa" (Macmillan) — he gives clear and sensible advice on first aid measures.

The illustrated book is written for the layman and is one of the best I have come across for instant identification of the snakes one might encounter in Southern Africa.

Perhaps, too, it will mean that all those harmless snakes whose existence is so necessary to maintain the ecological balance, will now be identified and left in peace to bask in the sun or wind their way home.

"In this bag I have a dwarf West African python," said Johan. "He's very docile, quite harmless and very beautiful. Would you like to hold him?"

And that's how I came to stroke one of the most beautiful little snakes I have ever seen.

Johan is a remarkable person — a self-trained herpetologist, he is one of the best-known men in his field in South Africa.

"It began," he said, "when I caught a brown house snake in the garden."

He was nine years old at the time and, though not encouraged to do so by his family, wanted more than anything else to take up herpetology.

As his interest in reptiles grew, so too did his knowledge of fauna and flora and nature conservation.

But Johan didn't go to university to further these studies. Instead he joined the police force — becoming a drug squad detective — and enrolled for a part-time law degree.

Lectures

But he didn't lose interest in reptiles and it was at about this time that his long-suffering family found a crocodile at the bottom of the garden.

"That was the last straw. They suggested I switch careers," said Johan. "So I enrolled for a BSc."

It was then mid-1979 and he went to work at the Durban Snake Park while he waited for the start of the next academic year.

A visit to the Transvaal Snake Park resulted in a job offer and before long he had been made curator. The BSc was forgotten.

During his years at the snake park, his interests broadened.

He embarked on his own study course of the reptile world, accumulating a personal library of books on the subject which is one of the most exten-

A CITES GIVES GREEN LIGHT TO CROCODILE SOUP

New Scientist 16 May 1985

Last week, Australian restaurants promised crocodile soup on the menu. The crocodiles are bred in Queensland. The offer follows a decision at a meeting of the Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES) in Buenos Aires this month to relax controls on several species of crocodile, which are now spreading rapidly in the wild.

The decision shifts the Nile crocodile, for instance, from CITES' Appendix I — a list of species effectively banned from trade — to Appendix II, which lists species for which exporting countries need permits and for which trade is monitored. The ruling was prompted by African states and follows the example of Zimbabwe, which won approval for its crocodile ranches from CITES two years ago.

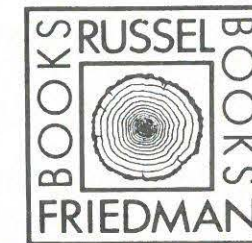
There remains considerable concern about the large trade in illegal crocodile skins. Sudan is a major supplier. But the meeting agreed quotas for nine countries that will allow more than 11 000 animals a year to be traded legally and turned into shoes and handbags.

Plans by six nations — including the British dependency of the Cayman Islands — to "ranch" the threatened green and hawksbill turtles for meat, soup and shells were rejected by the meeting.

Delegates of the 87 signatory states decided that even if the ranching operations took only limited numbers of eggs and achieved a better survival rate than found in the wild, the risks of creating even larger loopholes for the illegal trade by poachers and smugglers were too great. The Cayman Islands were backed by France, on behalf of its territory of Reunion, by Surinam, Indonesia and the Seychelles. Each offered various guarantees. They would take only eggs from nests likely to be flooded. And they would return a proportion of hatchlings to the nesting beach. But these were all turned down.

CITES decided to increase the monitoring and control of the trade in frogs legs by putting the species onto Appendix II. France supplies many frogs. They almost all come from India or Bangladesh. Conservation groups have denounced as cruel the trade, which now involves the legs of 140 million frogs every year. The meeting also heard of concerns for the Indian bullfrogs' future and the ecological impact of the destruction of so many pest-controlling amphibians.

NICK CATER, BUENOS AIRES



uit die natuur

ONS REPTIELE

N H G JACOBSEN

A much needed general account on the reptile fauna of South Africa.

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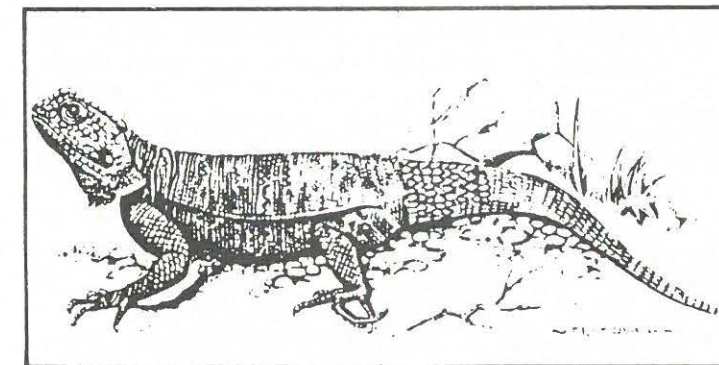


Fig.39 Damara klipkoggelmander Agama planiceps.

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SNAKES ALIVE: FROG FOR DINNER

The Star's Africa News Service
27 July 1982

NAIROBI — Kenya's Assistant Minister for the Environment and Natural Resources, Mr Philip Leakey, has a novel idea for feeding the country's rapidly growing population.

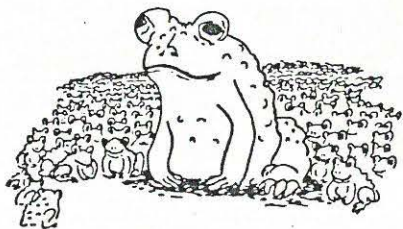
He suggested to Parliament that the production of edible frogs should be considered.

The Daily Nation newspaper followed up by saying: "We have no doubt that some people laughed at Mr Leakey's suggestion, but: we would like to suggest that there are other creatures worth being bred for food.

"Among them are snakes, horses, snails and even dogs — indeed, any creature that is not poisonous and is cheaper to breed than our traditional sources of meat.

"These creatures may not be good-looking, some may even be scaring and creepy, but they are nourishing and we do need nourishment.

"Human beings in other places feed on creatures that we abhor, Kenya can only accommodate so many cows, goats, and so on."

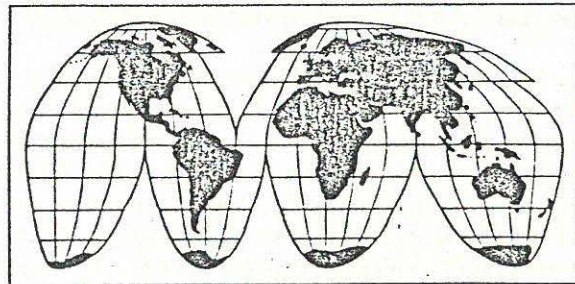


INFORMATION REQUESTED

Varanus exanthematicus albigularis
Richard Tyler, 41 Webb avenue, Warwick, Rhode Island, 02889, U.S.A.

Would like to obtain a pair of *Varanus exanthematicus albigularis* (Rock or Savannah Monitor) for breeding purposes. Young specimens would also be of interest.

AMPHIBIAN SPECIES OF THE WORLD



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Darrel R. Frost

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WHAT TO DO IF A PYTHON SHOULD TRY TO EAT YOU

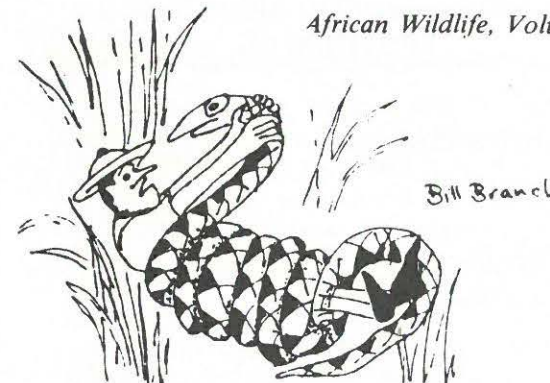
(with acknowledgements to Walter Rose's book, *The reptiles and amphibians of southern Africa*, published in 1962 by Maskew Miller. — Editor African Wildlife.

... should any of our readers be attacked by a really hungry python, the advice given some years ago in a missionary magazine which secured well-merited publicity may be of value. We therefore give it verbatim, though we have never been quite satisfied about the position of the writer's tongue when he composed it.

"Remember not to run away, the python can move faster. The thing to do is to lie flat on the ground on your back with your feet together, arms to the sides and head well down. The python will then try to push its head under you, experimenting at every possible point. Keep calm, one wriggle and he will get under you, wrap his coils around you and crush you to death. After a time the python will get tired of this and will probably decide to swallow you without the usual preliminaries. He will very likely begin with one of your feet. Keep calm. You must let him swallow your foot. It is quite painless and will take a long time. If you lose your head and struggle he will quickly whip his coils around you. If you keep calm, he will go on swallowing. Wait patiently until he has swallowed about up to your knee. Then carefully take out your knife and insert it into the distended side of his mouth and with a quick rip slit him up."

It all sounds very simple provided the snake **does** elect to start at the foot end. The "probably" and "very likely" in the above sound rather disquieting. However, the mainpoint appears to be to keep calm and hope that the snake also is acquainted with the correct technique and the rule that a slit mouth stops him from constricting. One must accept the writer's assurance that the leg-swallowing is quite painless, despite the python's formidable teeth and the successive traction on the flesh of the two sides of the maxilla and mandible in swallowing. But supposing one is not carrying a knife?"

African Wildlife, Volume 38, No 6



"Don't be a fool! I'm a herpetologist!"

REPRINTS

The following are the reprints of papers which are currently available from the Division of Amphibians and Reptiles, Museum of Zoology, The University of Michigan. Check those titles listed below which you would like to receive (those in limited supply will be sent on a "first come - first served" basis) and return the list to:

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Each of the curators in the Division of Amphibians and Reptiles, A.G. Kluge and R.A. Nussbaum, maintain personal research libraries and hope to continue reprint exchanges with you. In addition to these libraries, the Division curates a Graduate Student Research Library, to which we also hope you will send separates of your published papers. Whenever your reprint stock is limited, the Division's Graduate Student Library should receive priority.

AYALA, STEPHEN C. AND ENNIS M. HARRIS. 1984. A New Microteiid Lizard (*Alopoglossus*) From the Pacific Rainforest of Colombia. *Herpetologica* 40(2): 154-158.

BLANCHARD, FRIEDA COBB. 1943. A Test of Fecundity of the Garter Snake *Thamnophis sirtalis sirtalis* (Linnaeus) in the Year Following the Year of Insemination. *Pap. Mich. Acad. Sci., Arts and Letters* 28: 313-316.

BOOKSTEIN, FRED L., PHILIP D. GINGERICH AND ARNOLD G. KLUGE. 1978. Hierarchical linear modeling of the tempo and mode of evolution. *Paleobiology* 4(2): 120-134.

BREITENBACH, GARY L. 1982. The Frequency of Communal Nesting and Solitary Brooding in the Salamander, *Hemidactylium scutatum*. *Journal of Herpetology* 16(4): 341-346.

BRODIE, EDMUND D., Jr., RONALD A. NUSSBAUM, AND MARIANNE DIGIOVANNI. 1984. Antipredator Adaptations of Asian Salamanders (Salamandridae). *Herpetologica* 40(1): 56-68.

DUELLMAN, WILLIAM E. 1980. A New Species of Marsupial Frog (Hylidae: *Gastrotheca*) From Venezuela. *Occas. Pap. Mus. Zool. Univ. Mich.* (690): 1-7.

DUNHAM, ARTHUR E. 1978. Food Availability as a Proximate Factor Influencing Individual Growth Rates in the Iguanid Lizard *Sceloporus Merriami*. *Ecology* 59(4): 770—778.

FARRIS, JAMES S. AND ARNOLD G. KLUGE. 1985. Parsimony, Synapomorphy and Explanatory Power: A Reply to Duncan. *Taxon* 34(1): 130—135.

FARRIS, JAMES S., ARNOLD G. KLUGE AND M.F. MICKEVICH. 1982. Immunological Distance and the Phylogenetic Relationships of the *Rana boylei* Species Group. *Syst. Zool.* 31(4): 479-491.

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HARRIS, DENNIS M. 1982. The *Sphaerodactylus* (Sauria: Gekkonidae) of South America. *Occas. Pap. Mus. Zool. Univ. Mich.* (704): 1—31.

HARRIS, DENNIS M. 1985. Infralingual plicae: support for Boulenger's Teiidae (Sauria). *Copeia*, 1985(3): 560—565.

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HOWARD, RICHARD D. AND ARNOLD G. KLUGE. 1985. Proximate Mechanisms of Sexual Selection in Wood Frogs. *Evolution* 39(2): 260—277.

KLUGE, ARNOLD G. 1981. The Terrestrial environment and the Origin of Land vertebrates. A.L. Panchen (ed). 1980. (Book Review) *Syst. Zool.* 27(4): 508—511.

KLUGE, ARNOLD G. 1982. The Cladistic Perspective. *Science* 215: 51—52.

KLUGE, ARNOLD G. 1983. Cladistics and the classification of the great apes. Chapt. 6. pp. 151—177, 7 figs., 5 tables. In: R.L. Ciochon and R.S. Corruccini (eds.), *New Interpretations of Ape and Human Ancestry*. Plenum Publ. Corp., N.Y.

KLUGE, ARNOLD G. 1983. Cladistic Relationships among Gekkonid Lizards. *Copeia* (2): 465—475.

KLUGE, ARNOLD G. 1983. Type—Specimens of Amphibians in the University of Michigan Museum of Zoology. *Misc. Publ. Mus. Zool. Univ. Mich.* (166): 1—68.

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KLUGE, ARNOLD G. 1984. Type—Specimens of Reptiles in the University of Michigan Museum of Zoology. *Misc. Publ. Mus. Zool. Univ. Mich.* (167): 1—85.

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KLUGE, ARNOLD G. 1985. Ontogeny and Phylogenetic Systematics. *Cladistics* 1(1): 13—27.

KLUGE, ARNOLD G. 1985. Zoological Catalogue of Australia: Volume 1, Amphibia and Reptilia. By Harold G. Cogger, Elizabeth E. Cameron and Heather M. Cogger. (Book Review) *Herpetologica*, 41(1): 118—119.

KRAUS, FRED, 1985. A New Unisexual Salamander From Ohio. *Occas. Pap. Mus. Zool. Univ. Mich.*, (709): 1—24.

KRAUS, FRED. 1985. Unisexual Salamander Lineages in Northwestern Ohio and Southeastern Michigan: A Study of the Consequences of Hybridization. *Copeia*

The remaining titles will be printed in the next newsletter.

Editor.

INFORMATION REQUESTED

Pelusios niger

James Harding, Cranbrook Institute of Science, P O Box 801, Bloomfield Hills, Michigan, 48013, U.S.A.

Requires ecological or any other information, or sources thereof, on *Pelusios niger*. (West African turtle).



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XENOPUS GILLI CONSERVATION COMMITTEE

The members of the committee are as follows (in alphabetical order): Mr Ernst Baardt, Department of Nature and Environmental Conservation, Jonkershoek, Stellenbosch; Mr Derek Clarke, Staff of Cape of Good Hope Nature Reserve; Mr Atherton de Villiers, Department of Nature and Environmental Conservation, Jonkershoek, Stellenbosch; Mr John Comrie Greig, Eidtor, *African Wildlife*; Dr Mike Picker, Zoology Department, U.C.T.; Mr Reinhold Rau, S.A. Museum, Cape Town; Mr Otto Von Kaschke, Staff of Cape of Good Hope Nature Reserve; Mr Gerald Wright, Staff of Cape of Good Hope Nature Reserve.

Our advisory committee members are: Dr René Honegger, Curator of Zoology, Zoological Garden, CH—8044 Zurich, Switzerland; Dr H. Kobel (Honorary Chairman), Génétique Animale et Végétale, Université de Geneva, CH—1224, Geneva, Switzerland; Dr Geoff McLachlan, S.A. Museum; Mr Mark Simmonds, Department of Zoology, Westfield College, University of London, London, England.

The object of the project is to establish and maintain a pure, genetically uncontaminated population of the Cape platanna in an artificial pond in the Cape of Good Hope Nature Reserve, to wall off this pond to prevent emigration of Cape platannas and immigration of its competitor the common platanna, and to provide a controlled population of Cape platannas for basic ecological research.

The project will be carried out in the Cape of Good Hope Nature Reserve which is administered by the Divisional Council of the Cape.

The project has just commenced. a preliminary meeting of interested parties was held in January 1984, the Cape Platanna Conservation Committee was constituted on 6 February 1984 and an on-site inspection took place in the nature reserve on 11 February 1984.

We aim to construct the pond and build the *cordon sanitaire* in the form of a Vibracrete wall before the onset of the winter rains in May 1984.

The Cape Platanna *Xenopus gilli* is a frog endemic to the south-west Cape. It is the only frog from South Africa in the international Red Data Book for amphibians. It was placed on schedule 1 of the Cape Nature Conservation Ordinance of 1974 by Dr D. Hey, then Director of Nature Conservation in the Cape and is classed as an "Endangered Wild Animal" under that ordinance.

Its range in the past is not known exactly but relict populations exist in the Cape of Good Hope Nature Reserve, at one or two localities on the Cape Flats, and at Betty's Bay. The Cape Flats and Betty's Bay populations are probably doomed by habitat destruction, habitat modification and by genetic contamination.

The latter problem, only recently detected, has been the stimulus for the formation of the C.P.C.C. Research by Dr Hans Rudi Kobel of the Institute of Genetics in Geneva has shown that the opportunistic, adaptable and aggressive common platanna *Xenopus laevis* can hybridise freely with the Cape platanna to produce fertile hybrids. It also cannibalises the young of the Cape platanna and possibly also subadults.

The common platanna is large, has a rapid reproductive rate, and is expanding its range because of the impact of civilisation in the south-west Cape. It has been introduced to areas from which it was perhaps previously absent, both accidentally and deliberately.

The common platanna is now relatively abundant in the Cape of Good Hope Nature Reserve from which it may have been absent in the past, and Dr Picker, one of the founding members of the C.P.C.C. (whose Ph.D. thesis through the University of the Witwatersrand was entitled "Studies on *Xenopus* populations"), has found mixed populations of Cape platannas, common platannas and hybrids in seven ponds within the reserve. Other ponds have only common platannas, and only two ponds appear to contain only *X. gilli*.

It is clearly a matter of time before *X. gilli* is hybridised out of existence.

Breeding stocks of pure *X. gilli* have been established in Geneva and in London, thanks to strong overseas scientific and conservationist interest in this problem and thanks, too, to the foresight of the Cape Department of Nature and Environmental Conservation (C.D.N.E.C.) which granted the export permits.

We will now actively seek to preserve *X. gilli* as a pure species in the nature reserve. Firstly, we will remove *X. laevis* and hybrids by trapping and other means (including the use of explosives with the aid of the S.A.D.F.). Secondly, we will, with the co-operation of the C.D.N.E.C., try to find other international institutions who are prepared to maintain breeding colonies of *X. gilli*, and thirdly we will use the walled-off pond for which we are presently seeking finance, for a long-term research and monitoring programme to determine the ecological factors which are vital to the well-being of the Cape platanna.

Platannas are popular animals for scientific work worldwide. There is immense interest in our local problem here

from conservation, ecological, genetic and evolutionary points of view. *X. gilli* is constantly in demand for research purposes by overseas researchers.

The work by administration of the project will be carried out by the staff of the Cape of Good Hope Nature Reserve under its Chief Warden Gerald Wright. Research work will be carried out by Dr Picker of the University of Cape Town and his postgraduate and undergraduate students (*Xenopus gilli* is in fact the main 3rd year field project for his students for 1984) and monitoring will be carried out by all members of the C.P.C.C. which will include the two herpetologists employed by the C.D.N.E.C.

The project has obviously excellent long-term prospects, and could prove to be a model for other similar schemes elsewhere.

We anticipate that our wall will cost R2 300 and that a Pan-Jet humane frog-marking system will cost an additional R1 000.

SECURITY FENCE FOR *XENOPUS GILLI* AT CAPE POINT

On the 17th December, 1984 the vibrocrete wall surrounding Geps dam in the Cape of Good Hope Nature Reserve was completed. The building operations were carried out by the staff of the reserve, largely under the supervision of Mr Otto von Kaschke. The wall now covers a perimeter of 252 m (8 m short of the estimated figure) and stands about 70 cm high. At the time of writing, the security fence on top of the wall still needs to be installed and will complete the barrier which will prevent *Xenopus laevis* and hybrid frogs from entering the reserve. Building operations were recorded on film by Mr von Kaschke, the next stage of the operation will be the removal of any stray *X. laevis* and hybrids from the pond by seine netting. The very low water table during the summer months will facilitate the netting. The *X. gilli* will be returned to the pond and during the winter months regular trapping will be done to ensure that no *X. laevis* or hybrids which had aestivated in the mud during summer reinvade the pond. Thereafter, population estimates of *X. gilli* will be done once yearly on the annual UCT zoology field trip. The frequent capture and removal of *X. laevis* and hybrids from Geps Dam in the past will facilitate the cleansing programme (1984 population of *X. gilli* in Geps Dam was calculated as 263).

At present the fence is evident from the road, a result of denudation of the screening vegetation by a recent fire. Hopefully, regrowth following the winter rains will mask the fence. On behalf of the Cape Platanna Conservation Committee, I would like to thank the South African Nature Foundation, the Wildlife Society of southern Africa and the personnel of the Cape of Good Hope Nature Reserve, for their help in the erection of this wall.

PROSPECTIVE M.Sc STUDENTS

OPPORTUNITY

RESEARCH

ZOOLOGIST

A graduate is required to conduct independent research in the field of herpetology. Although preference will be given to applicants interested in the tortoise *Geochelone pardalis*, any research project concerning aspects such as either the Ecology, Environmental physiology, Anatomy or Taxonomy of any Reptile or Amphibian occurring in the Orange Free State will be considered. The research results can be used to obtain a M.Sc. degree at any South African University.

QUALIFICATION

Candidates must be in the possession of a B.Sc. (Hons.) degree with Zoology as a major. A driving licence is essential and the successful candidate must be prepared to conduct field work.

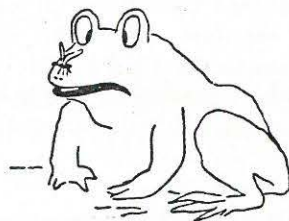
The salary will depend on qualifications and experience.

BENEFITS

The Museum offers a wide range of benefits, including: a 13th cheque as a bonus, housing subsidy, adequate leave (including days between Xmas and New Year), flexitime, medical and pension schemes, stay and travel expenses when doing field work, the use of a vehicle pool.

INTERESTED?

Apply by prescribed form obtainable from The Director, National Museum, Bloemfontein 9300 or contact Mr J.H. van Wyk at (051)-79609 if you need more information or application forms.



BOOKS

'STUDIES ON THE ECOLOGY OF MAPUTALAND' EDITED BY M.N. BRUTON AND K.H. COOPER

This 560-page, hard cover book on the ecology of northern Zululand is available at a special discount price of R20-00 plus postage and packing to HAA members. The book consists of 40 chapters of leading experts, of which four are on amphibians and reptiles. These include:

'The Amphibia of Maputaland' by J.C. Poynton (6 pages, one illustration).

'The Reptiles of Maputaland' by M.N. Bruton & W.D. Haacke (36 pages, 16 illustrations 6 Tables, a detailed treatment of 112 species and subspecies including 41 lizard taxa, 2 amphibians, 1 crocodile, 56 snakes and 12 chelonians; the chapter also includes sections on early collections, reptile diversity, zoogeographical affinities, mode of life, community structure of a grassland herpetofauna and conservation status. Each species account gives details on distribution, habitat preferences, breeding and feeding, when available).

'Sea Turtle Research in Maputaland' by G.R. Hughes (5 pages, one illustration).

'Crocodile Research in Maputaland' by A.C. Pooley (7 pages, 6 illustrations, 1 Table).

Other chapters include accounts on the climate, geology, limnology, oceanography, botany, zoology, anthropology and conservation of Maputaland.

The book is published by Rhodes University and is available from the Publications Secretary, J.L.B. Smith Institute of Ichthyology, Private Bag 1015, Grahamstown 6140, South Africa.

M.N. BRUTON

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La nomenclature supragénérique des Amphibiens Anoures. Alain DUBOIS, 1984. 64 p., 1 pl. - 90 F.

An important new review by Dr Alan Dubois of the higher taxonomic nomenclature of Anuran amphibians has been published by the Paris Natural History Museum (90 Franc; approx R20).

ABSTRACT

This paper is devoted to a study of the suprageneric nomenclature of Amphibia Anura.

The Rules of the nomenclature of taxa of the family-group, as given by the International Code of Zoological Nomenclature, are reminded. Some general and simple rules are proposed for the nomenclature of taxa above the family-group, which we suggest to call class-group taxa.

For all taxa of the class-group (class, subclass, superorder, order, suborders) and of the family-group (superfamilies, families, subfamilies, tribes) recognized by recent authors in the order Anura, the valid name, with its author, date, and detailed synonymy, is given.

The following nomenclatural changes are suggested for taxa of the class-group: the subclass should be called Batrachia Brongniart, 1800 instead of Lissamphibia Haeckel, 1866; the suborders should be called Discoglossoidae Sokol, 1977, Pipoidae Dubois, 1983 and Ranoideae Sokol, 1977 instead of respectively Archaeobatrachia Reig, 1958, Mesobatrachia Laurent, 1980 and Neobatrachia Reig, 1958.

The following nomenclatural changes are suggested for taxa of the family-group: Hyloidea Gray, 1825 (1815) should replace Bufonoidea Gray, 1825; Cyclorhamphini Bonaparte, 1850 should replace Grypiscini Mivart, 1869; Hylodinae Günther, 1858 should replace Elosiinae Miranda-Ribeiro 1923; Genyophryinae Boulenger, 1890 should replace Sphenophryinae Noble, 1931.

In various cases, the names remain unchanged but changes must be brought to the authors and/or dates traditionally given to them.

Problems concerning the nomenclatural validity of the names Discoglossidae Günther, 1858, Dendrobatidae Cope, 1865 (1850) and Phrynobatrachinae Laurent, 1940 (1878) are pointed out, and these cases are the matter of applications submitted to the International Commission on Zoological Nomenclature.

Finally, it is suggested that the families Discoglossidae, Pipidae, Pelobatidae and Bufonidae should, in the present state of our knowledge, be subdivided in subfamilies, and the valid names for these subfamilies are given.

THE SNAKE BOOK

By Roy Pinney. 1981. Doubleday, Garden City, New York, 248 pp., illus. U.S. \$12.95

As a person who daily works with snakes, and who, almost as frequently, is called upon to dispell myths, ally fears, and convince the general public that these terribly misunderstood animals are beneficial, I have long hoped for a book which would present snakes in a favourable and non-sensational manner. This book does fill a gap in popular literature, and I would like to recommend it without reservation; however, that is not possible.

The book does offer some insights into the world of snakes for the novice snake fancier or the armchair naturalist. It is reasonably priced and contains numerous black-and-white photographs of a variety of snakes. However, the text and the organization of the book leave a great deal to be desired. There are a number of statements which could be misconstrued by the layman, for whom this book was intended, and for whom it will have the greatest appeal. To the professional herpetologist, this volume is probably of little value other than entertainment, and the errors which periodically surface will be ignored by these individuals.

The author has a penchant for multi-syllable words and compound sentences, whereas a simple statement using simple words, in a clear style would not only suffice, but would make more sense to the reader. He has a very annoying habit of introducing scientific terminology into the text, pages before he defines these terms. There is no glossary — a tremendous failing in any introduction to a subject. The author's over-all writing style is rather inconsistent. Many of the sections are straight forward and free flowing when read. Others are far too poetic for this subject and rather obtuse in their readability. (They would be more appropriate in a Harlequin Romance). He, at times, seems to have become befuddled by the language and makes mis-statements which were missed by the proofreaders.

The author frequently makes very generalized statements, such as [page 138] "More [people] die from the bite of a bee, wasp, or hornet than from a venomous snake. Even poisonous spiders contribute twice as many fatalities as snakes. The odds are literally greater of being killed by lightning!", without giving any indication of where he obtained his data. I have serious doubts as to the validity of some of these statements, and I worry tht the uninformed reader will accept them as truth. On page 154, he states, "A study done for the World Health Organization estimated that there were 30 000 to 40 000 deaths annually from snakebites." If this is true, his previous statement would indicate that between 60 000 and 80 000 people die annually from spider bites, and that more than 30—40 000 people are killed by lightning.

These figures seem a bit unbelievable to me; the author does not cite a reference so that the reader may investigate.

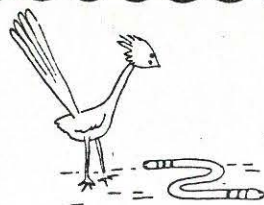
In several instances, the author contradicts himself later in the text. For example, on page 173, he states that the bite of a sea snake "is relatively painless . . .", and then, on page 180, he states, also about sea snakes, "While the bites are rarely fatal, they are extremely painful." There are some errors in the book which we can put down to typographical or spelling mistakes, but there are at least two photographs misidentified. The photo on page 117 is labeled as an Anaconda (*Eunectes murinus*) of South America. In actuality, it is a White-lipped Python (*Liasis albertisii*) from New Guinea. The photograph on page 205 is identified as an Amethystine Python (*Liasis amethystinus*) (the spelling of the specific name should be *amethistinus*) which it certainly is not. It is most likely a Black-headed Python (*Aspidites melanocephalus*).

The book opens with a chapter on "famous" herpetologists. It is interesting and entertaining reading, but the author's choice of people to so honour is a bit strange. Three of the ten herpetologists [sic] included were (or are) not herpetologists, but showmen and entrepreneurs. I strongly felt that this book required more of a conservation base, and including these users of wildlife was a poor choice. There follow chapters on Physiology, Snake Behavior, Snakes in Captivity, Venomous Snakes, Men Versus Snakes, and Opportunities in Herpetology. I enjoyed the chapter entitled, "Men versus Snakes" perhaps more than any other as it dealt with superstition, folklore, and historical beliefs about snakes. At the beginning of the chapter on Snakes in Captivity, the author indicates that he will discuss the breeding of two species of snake, and appropriately has two sub-headings dealing with those species. However, he only details the breeding of one species, not the other. He devotes an entire chapter to poisonous snakes, but does not give equal time to the non-poisonous taxa, which are more numerous and diversified.

I believe this book is an honest attempt at presenting a relatively misunderstood subject, and one with limited popularity, to the general public. However, because of statements which can easily be misconstrued by the layman, errors and unsubstantiated generalizations, I cannot whole-heartedly recommend it.

THOMAS A. HUFF

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AN INVITATION

Members are invited to contribute to the Newsletter. Any newsworthy items are welcome. Please do not hesitate to comment on the Newsletter and its present format. On behalf of the committee I invite unhappy as well as happy members to put there views to me. Remember you participation will make this a better association.

EDITOR

