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STEVEN SIMPSON

P.O. BOX 853, BRIGHTON, BN1 5DY. ENGLAND
Tel: 0273 - 727328
SPECIALISTS IN REPTILE AND AMPHIBIAN BOOKS.

BOOKS FOR THE HERPETOLOGIST AND
COLLECTOR-LISTS ISSUED.

ISSN 0257-7054

H.A.A.

NEWSLETTER 12



HERPETOLOGICAL ASSOCIATION OF AFRICA

H.A.A. COMMITTEE

Chairman & Newsletter Editor:
J. Marais
Assagay Safari Park
P.O. Box 73
Bothas Hill
3660

Hon. Secretary/Treasurer
R.M. Douglas
National Museum
P.O. Box 266
9300 Bloemfontein

Journal Editor:
W.R. Branch
Curator of Herpetology
Port Elizabeth Museum
P.O. Box 13147
Humewood
6013

Journal Subeditor:
R.C. Boycott
Malolotja Nature Reserve
P.O. Box 1797
Mbabane
Swaziland

Committee Members:
N. Jacobsen
Nature Conservation Division
P. Bag X209
Pretoria
0001

A.J.L. Lambiris
Natal Parks Board
P.O. Box 662
Pietermaritzburg
3200

P. le F.N. Mouton
Department of Zoology
University of Stellenbosch
Stellenbosch
7600

D.R. Morgan
Transvaal Snake Park
P.O. Box 97
Halfway House
1685

MEMBERSHIP FEES FOR 1990

Because of increasing printing costs and escalating postage the Committee of the H.A.A. found it necessary to increase

membership fees for 1990. Regretfully there are also several members who are in arrears with such payments.

1990 Membership Fees:

Ordinary members..... R20.00
Student Members..... R15.00
Overseas Members..... \$15.00 (USD)

* Kindly submit all monies to our Secretary/Treasurer.

FIRE DESTROYS RESEARCH CENTRE AT MANYELETI

During 1987 the Division Nature Conservation of Gazankulu created a Research section at Manyeleti Game Reserve in the Eastern Transvaal. The Section was mostly involved in herpetological work on indigenous reptiles but also served as a base from which other management-orientated research work was done. This included veld assessments, carrying capacity calculations, large herbivore population monitoring and censusing techniques, culling data collection, etc.

During 1988 the centre was completed and due to its uniqueness, it was decided to concentrate on species that have been researched poorly. It became clear that very little reptile data exists especially on venomous snakes. Several priority species were identified and projects initiated. These projects included Red Data Species such as the Gaboon viper, the Forest cobra and the Natal Hinged Tortoise. The projects were done in cooperation with other conservation bodies such as the Natal Parks Board, Transvaal Nature Conservation Division, etc.

Important projects included:

1. An attempt to establish the captive breeding potential of the Zululand Gaboon viper.
2. A study on the ecology of the Puff Adder, a common yet neglected species.
3. A study on various aspects of the biology of the Forest cobra.
4. Captive breeding of several indigenous reptiles in an attempt towards better understanding of the species as well as collection of data. Breeding success was achieved, among other, in the following species: African Rock pythons, Boomslang, Horned adders, Green mambas (2nd generation), Rock monitors, Black mambas (2nd generation), Forest cobras, Shield-nosed snakes.

As a result of public interest, a public reptile park was proposed and building started late in 1988. It was designed to accommodate the many school groups visiting the reserve and reptiles were to be included into their educational programme.

On 13 September 1989 the research staff were engaged in ringing White-backed vulture chicks in the veld. Upon their return they found the Centre ablaze. Although some snakes were rescued, most of the specimens and equipment were lost. The fire apparently started due to a short in the electrical system in the nursery room. All the staff assisted in a desperate attempt

to save the building, even endangering their own lives. The current estimate of damage done is approximately R500,000, not including irreplaceable specimens and material.

Our biggest loss was definitely the live specimens of which we had several breeding groups established. Another big loss was all the data, both field notes as well as all the data collected over the past six years. We were in the process of compiling the puff adder data on growth and energy consumption when it was destroyed! All those bites for nothing!! Other losses included snakes on breeding loan from other herpetoculturists such as Transvaal Snake Park, Joan Paul LeBrun, Gavin Carpenter and Wulf Haacke.

Another big loss was the total destruction of all the material on loan from the Transvaal Museum. The Section was busy with a revision on the Shield-nosed snakes, Aspidelaps scutatus with emphasis on the biology of A. s. intermedius. These specimens comprised approximately 85% of all Aspidelaps in wet collections. The specimens were stored in 200 litres of alcohol which enhanced the fire. All the live specimens on loan from the Museum were also destroyed.

We then went about cleaning the mess and taking inventory of the damage. As most cages were destroyed we sent live specimens to Transvaal Snake Park as an interim measure. Several snakes developed serious lung infections from the poisonous fumes they had inhaled and died. Expensive exotic snakes were also destroyed in the fire. These included Reticulated pythons, Burmese pythons, Royal pythons, gravid Boa Constrictors, Sinaloan kingsnakes, Californian kingsnakes, Great Basin Gopher snakes, Taiwanese Beauty snakes, Neotropical Cascabel rattlesnakes, Southern Pacific rattlesnakes, albino and xanthic Corn snakes, Russels vipers and Nose-horned vipers, etc.

At present, phase one of the public park is approaching completion and should be open to the public during December 1989 after which phase two will receive all the attention. Due to the lack of Government funding we will be seeking permission to raise funds through private donations to rebuild the centre. As soon as a fund-raising number is obtained we hope to market our efforts through the media. The new centre, a possibility within two years, will be a potential breeding centre for endangered reptiles on a global basis, similar to the Reptile Breeding Foundation in Canada.

I would like to thank the following for their assistance during the crisis: the staff at Manyeleti for risking everything, Dave Morgan for believing so strongly in what we are doing, Wulf Haacke for his continued support and everyone who showed so much interest and encouragement.

G.V. Haagner
Research Officer; Manyeleti Game Reserve,
P.O. Manyeleti, 1362

THE GIANT OF THE FROG WORLD

Which is the largest frog of all? The largest North American frog is the bullfrog, Rana catesbeiana, which reaches a snout to vent length of 200 mm. The African Bullfrog, Pyxicephalus adspersus adspersus, is the largest frog in southern Africa, growing to an impressive 225 mm SVL. These large amphibians will eat just about anything they can overpower, including small birds, rats, snakes, crabs and other frogs. There are two South American toads which are even larger. One is the marine toad, Bufo marinus, which may reach a SVL of 240 mm, while Bufo blomerqi grows to a massive 250 mm SVL.

By far the largest anuran in the world is the West African ranid, Gigantorana (Conraua) goliath. This giant of the frog world attains a SVL of 300 mm or more, and may weigh up to 3,3 kg. These frogs are known to prey on ducks and rats. The only photograph of this unbelievably large frog known to the writer is one in Integrated Principles of Zoology (1988, Hickman, Roberts and Hickman. Times Mirror/Mosby College Publishing, St. Louis, p. 504). The hindlimb of this amazing amphibian is far larger than that of a chicken and the animal is probably highly prized as a food source by the local human population.

The world's smallest frog, Psyllophryne didactyla, is found in Brazil, and adults attain a snout to vent length of only 9,8 mm.

M.F. Bates, National Museum, P.O. Box 266, Bloemfontein, 9300.

LONGEVITY RECORD FOR Dasypeltis

In May 1959 my son brought home an eggeater and, some ten years later, we obtained a mate for it. Both measured about 50 cm and are still alive today!

Neither of them grew much and are housed in a vivarium with the following dimensions: 40 x 50 x 93 cm. It is decorated with a branch for them to climb onto and a bottle covered with sand in which they seek refuge. They only feed from November to February and show a marked preference for Laughing dove eggs.

For many years they have consumed 6 to 25 eggs annually but now they are feeding less and shed once a year only. They do, however, appear to be healthy and content.

I ask the following question: How long do snakes live? My son is now a grandfather and I am 73 years of age. If the snakes continue at this rate they are both going to outlive me.

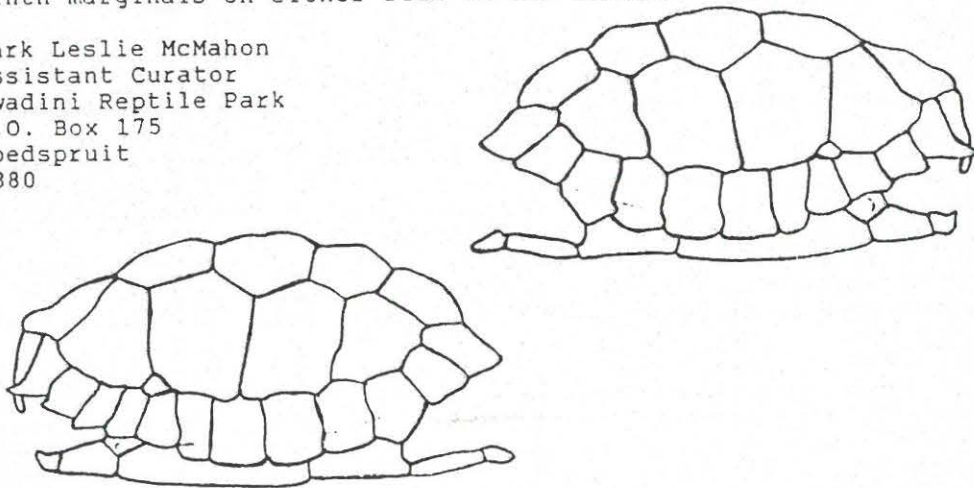
Mrs. Tanzer-Szongott
Translated from Afrikaans and submitted by Rod Patterson

SCUTE VARIATION IN JUVENILE LEOPARD TORTOISE

Of eleven leopard tortoises (*Geochelone pardalis*) hatchlings at Swadini Reptile Park at the beginning of 1989, two had marked scute variations.

One had a horizontal division of the fifth vertebral and the other had an extra marginal on the right side. Most interesting, however, was the other variation in the latter case. Two additional extremely small scutes are situated at the division of the third and fourth costals and the eighth and ninth marginals on either side of the shell.

Mark Leslie McMahon
Assistant Curator
Swadini Reptile Park
P.O. Box 175
Hoedspruit
1380



SPECIAL OFFER

REPTILES OF SOUTHERN AFRICA
by Patterson & Bannister

This super book has been offered to H.A.A. members at a reduced price. However, to take advantage of the offer, your cheque/postal order must reach the H.A.A. by no later than 20 February 1990.

Normal price R39.50 plus G.S.T., packaging & postage.
H.A.A. Special Price only R29.00 fully inclusive!!!!

Please send your R29.00 with return address to Rod Douglas. Cheques/Postal Orders to be made out to the Herpetological Association of Africa (No cash, please).

Please note that this offer does regretfully not apply to overseas members.

PYTHONS AND CANE RATS

An article by Evelyn Levitz in the February 1989 edition of PUBLICO magazine (Volume 9:1, pp. 8 - 9) should be of some interest to herpetologists and foresters alike.

Mr. Chris Botes, Principal Forester at De Hoek Forest, Tzaneen, is quoted as saying:

"Sometimes, certain drastic measures are called for while you are looking after a forest. For example, at one time, cane rats were destroying the East African and East Indian Mahogany trees (furniture wood species). Pythons were the ideal answer. The local newspaper helped to spread the word. Neighbouring forestry concerns, nature conservation bodies, and nearby farmers either brought pythons themselves, or asked us to come and catch the ones they had. We released them at the riverside. Since then there has been a drastic drop in the number of cane rats. Now, occasionally, a lucky hiker will have the additional bonus of seeing a python."

The Southern African python's value in controlling cane rat populations in Natal's sugar-cane plantations is well known.

The efficiency with which pythons can destroy rodent populations is perhaps best illustrated by two large carpet pythons, introduced to Thursday Island, north-east of Australia, which quickly rid the island of the rats which were overrunning it (Broadley, 1983, p. 25, Fitzsimons' Snakes of Southern Africa).

Other rodent-eating snakes, like the mole snake and brown house snake, are, like the python, financial assets to man, as they help control rodent populations which often cause great losses to grain farmers and merchants. In one year, the approximately 3000 million rats and mice in China destroyed 20 million hectares of farming land and consumed 5 million tons of grain (CHINA DAILY - Sapa-R).

It is time that man recognizes, unconditionally, the ecological significance of his most hated "enemy", the snake.

M.F. Bates
National Museum
P.O. Box 266
Bloemfontein
9300

C'mon lads, please pay your membership fees!

PUFF ADDER ENVENOMATION OF A DWARF MONGOOSE

An adult dwarf mongoose (Helogale parvula) of about 300 g was received on 9 December 1988. The mongoose had been trapped in a building, was easily caught and brought to myself unscathed. Because of limited time, the mongoose was not released into the reserve immediately. It was contained in a large carton box which was temporarily placed in one of our outdoor snake pens. This pen is one of seven, specially designed for reptiles for captive breeding purposes. It measures 4 X 6 metres and the surrounding wall is approximately 1,2 m high. It has natural vegetation and a pond. About 30 minutes after placing the mongoose there, a prolonged high-pitched squeal was heard. This came from one of the pens. It was immediately evident that something had happened to the mongoose and further investigation revealed that the mongoose was absent from both box and pen. It was found in the puff adder enclosure which housed eleven healthy puff adders (Bitis arietans).

I carefully retrieved the petrified mongoose. At a glimpse it was clear that it had been bitten by at least two puff adders, once between the shoulder blades and once on the right hind rump. The shoulder wound bled freely. The mongoose was taken inside for observation and showed signs of distress within 40 minutes. On inspection no local swelling was noticeable as is to be expected with cytotoxic envenomation, but the right foreleg appeared lame. This leg was lifted from the ground and drawn close to the body while the head drooped and the whole body tilted forward on the side of the raised leg. The mongoose uttered distressing hiccup-sounding grunts. It seemed apparent that the mongoose was suffering as a result of the bite despite the theory that mongooses have a high resistance to snake venom.

I picked the animal up with gloved hands and, with help from my wife and our reserve manager, injected 3 ml of polyvalent antivenom intramuscularly into the foreleg and uninjured rump. I couldn't locate a vein in the tail or forelimb. The antivenom used had already expired and was somewhat discoloured.

I was aware of antivenom being used successfully on dogs bitten by puff adders and by the black mamba (Dendroaspis polylepis) and, on a previous occasion, used it on a 20 kg Staffordshire bull terrier that was spat in the eyes by a spitting cobra (Naja mossambica). The antivenom was used as a rinsing agent, roughly diluted 1:10 with water.

The mongoose was returned to its original container with a shelter box and a bowl of water and was maintained at 28 degrees Celcius. It didn't feed but drank water. Recovery was dramatic and the mongoose was released into the reserve two days later, fit as a fiddle.

R.A. Els
Gazankulu Nature Conservation Division
Manyeleti Game Reserve
P.O. Manyeleti
1352

OBITUARY

DR. REGINALD FREDERICK LAWRENCE 1897 - 1987

Dr. R.F. Lawrence, who was a life member of the H.A.A. since it's inception, was born in George. He received his Ph.D for his thesis on "The Arachnida of South West Africa" in 1928 from the University of Cape Town. Employed at the South African Museum from 1921 to 1935, he resigned in 1935 to take up the position of Director at Natal Museum but resigned in 1948 in order to devote his time to research. In 1953, Dr. Lawrence rejoined the staff at Natal Museum as a Professional Scientific Officer after having worked at the museum as a C.S.I.R. research fellow during the interim years. Dr. Lawrence retired from the Natal Museum in 1963.

Pinning Dr. Lawrence to a field of work results in a diversity of possible titles equal only to the diversity of his publications. Although primarily an Arachnologist and Acarologist, he was equally at home being a Herpetologist, Biologist, Ecologist and Taxonomist. Dr. Lawrence was truly one of our greatest natural scientist with compatriots like Dr. V.F. Fitzsimons and Dr. A. Roberts. Having worked on or done work related to a diversity of animals such as frogs, lizards, snakes, rodents, bats, shrews, moles, bushbabies, spiders, solifuges, scorpions, mites, centipedes and millipedes, etc. illustrates this well.

"The Biology of the cryptic fauna of the forests with special reference to South African spiders" (1953) and "A conspectus of the South African spiders" (1964) are but two of the 141 scientific publications that Dr. Lawrence produced between 1927 and 1963. Even after his retirement another 50 publications were produced. He was also editor of the Annals of the Natal Museum from 1935 until he retired.

Dr. Lawrence's interests in herpetology went way back to 1929 when his publication on "The Reptiles of South West Africa" was completed. While working on reptile and amphibian mites, he described some 90 species occurring on 4 species of frog, 64 species of lizard and 5 species of snake. The subfamily Lawrencarinae, genus Lawrencarus and species eweri represents mites found in the mucus and mouths of toads. Dr. Lawrence was a pioneer in the study of mites in South Africa. He was also the only South African scientist who had devoted so much time to the study of reptilian and amphibian ectoparasites and our knowledge would have been that much poorer had it not been for his enthusiasm and devotion to the subject.

INFORMATION ON Varanus

I am collecting data on Bosc's, Savannah, Tree Leguaan, White-Throated Monitor, Likkewaan, Veldlikkewaan, Monitor Lizard (Varanus exanthematicus, Varanus exanthematicus albigularis, Varanus e. exanthematicus, Varanus e. angolensis (Angolan Savannah Monitor), and the Yellow Monitor [Varanus flavescens]).

I am also looking for drawings, photographs and any other information on Varanus and would like to correspond with persons who have an interest in lizards.

Mark Bayless, 1406 Holly, Berkeley, California 94703, USA

FROM THE PRESS

SCHOOLBOY DIES FROM MAMBA BITE

An 11-year-old boy has died after being bitten in the face by a deadly green mamba.

Wiseman Gumbushe of Mtwalume on the Natal South Coast died at King Edward VIII Hospital in Durban a week after the snake bite, which caused brain damage.

This week an uncle, Joseph Gumbushe, said the boy was playing in the bush when the mamba struck. His heart stopped beating and he was not breathing when rescuers arrived to rush him to Port Shepstone Hospital.

When doctors found he had brain damage, he was flown to Durban where he died last week. Wiseman was buried on a farm cemetery not far from where he was bitten.

The Sunday Times

SNAKE BITE MAN IN A COMA

JOHANNESBURG: The Curator of the Transvaal Snake Park, Mr. Dave Morgan, was airlifted to the Johannesburg hospital in a coma late yesterday afternoon after being bitten while feeding a young one metre long black mamba.

Mr. Rod Patterson from the snake park said last night the incident happened at about 4.45 pm when Mr. Morgan was about to give the mamba a dead mouse to eat.

"While he was feeding the snake it must have missed the mouse and bit him on the hand. The park's paramedics were called and a pressure bandage was applied. At that stage Mr. Morgan passed out." -Daily News Correspondent.

* (Dave recovered rapidly and was back at work within a couple of days. More information to follow in future H.A.A. publications - Ed.)

In recognition of his work Dr. Lawrence had eight species of mite and a Cordylus named after him by his peers. Elected a Fellow of the Royal Society of Southern Africa in 1935, he was also President of the Entomological Society of Southern Africa in 1953. He was awarded the Medal of the South African Association of Advancement of Science in 1956 and the Medal of the Year by the Zoological Society of South Africa in 1975. The prestigious honour of becoming one of the first Honorary members of the American Arachnological Society was awarded to Dr. Lawrence in 1985. Further information on Dr. Lawrence, his work and publications can be found in the following publications:

Annals of the Natal Museum (1964) Vol. 16:i - ix.

Zumpt, F. 1961. Editor. The Anthropod Parasites of Vertebrates in Africa south of the Sahara. Vol. 1 (Chelicerata) pp. 457. S.A. Inst. Med. Res. 9 (1).

Submitted by R.M. Douglas.

REQUESTS

INFORMATION REQUEST

Beginning in 1977, the Vertebrate Pests Committee of the Standing Committee of Agriculture (Australia) has been working to develop guidelines for uniform legislation by all Australian States and Territories, to provide adequate control over the introduction, movement and keeping of vertebrate species not indigenous to Australia. The proposed legislation's objective is to control animal species which are actually or potentially a threat to agriculture, the natural environment or public safety.

As part of these endeavors, lists of species in Australia have been developed and efforts are now being directed towards a rational process of risk assessment. To assist in this process and provide important background data for the reclassification of reptile and amphibian species proposed for importation into Australia, information is requested on the establishment of any species of reptile or amphibian in the wild outside its natural range.

In particular, details are sought on the species concerned, where and when it/they became established, and how the establishment arose (escape, release, etc.). Particulars on the threat posed and steps taken to minimize or halt the damage would also be of great assistance. Copies of any published accounts of this/these establishments would be appreciated.

Please send to:

Chris B. Banks

Curator of Reptiles, Royal Melbourne Zoo, P.O. Box 74, Parkville; Victoria 3052, AUSTRALIA

SPECIMEN REQUEST: Dr. U. Joger, Hessisches Landesmuseum, Friedensplatz 1, 6100 Darmstadt, W. Germany, needs (for scientific research) southern African Bitis species. Offers for exchange North African Sidewinders, wild-caught Cerastes cerastes and C. vipera.

WANTED: Second-hand books on reptiles and amphibians. Please contact Johan Marais. Tel: 031-7771205

BACK ISSUES OF H.A.A. JOURNALS AVAILABLE

At present, only the following issues of the H.A.A. Journal are available as back issues:

No. 26 - Dec. '81; No. 27 - June '82; No. 28 - Dec. '82;
No. 29 - Oct. '83; No. 31 - Jan. '85; No. 32 - Jan. '86;
No. 33 - Nov. '87; No's 34, 35 & 36.

Please contact the Hon. Secretary/Treasurer for prices.

It is cold
and the snow is falling
look around you
there is no snake crawling
Sultans of the warmth, they worship the sun
mind their own business
no need to run

It is hot
and the wind is blowing
look in the trees
there is no snake going
lovers of the calm, they shock and they charm
mind their own business
they are not going to harm

It is warm
and the rats are gnawing
look around you
a problem is dawning
leave them alone, they will chase the scum home
mind their own business
allow them to roam

By Mark Leslie McMahon

THE CROCODILIAN STUDY GROUP OF SOUTHERN AFRICA

Department of Animal Science
University of Pretoria
Pretoria 0001

The Crocodilian Study Group of Southern Africa has been established as a bureau to present first-hand information on crocodilians, crocodile research and crocodile production to its members.

The objectives of the study group are to:

- create a forum through which participants can be kept informed of the latest research findings and developments pertaining to all aspects regarding crocodilians of the world and South Africa in particular.
- create a forum for producers and researchers to exchange ideas and identify information gaps which could either be followed up by liaising with producers abroad, literature studies or research projects, to benefit the industry.

Information will be disseminated to all participants by means of a newsletter which will be compiled on a regular basis when relevant and appropriate information comes to the attention of the coordinators.

Regular updates on the most recent literature and developments in the world of crocodilians which may be of interest to the crocodile producer and/or research enthusiast will be possible due to the close liaison this study group has with the Crocodile Specialist Group of the Species Survival Commission, the American Alligator Farmers Association and other bodies involved with crocodilians. Apart from this, we have access to the CROCLIT database.

Please note: The Crocodilian Study Group of Southern Africa is not a society or association for producers or scientists, nor is it associated with such a society or association. It is a group of crocodilian enthusiasts interested in collaborating to their mutual benefit.

The coordinators of the study group are:

Prof. G.A. Smith
Dept. Animal Science
University of Pretoria
Pretoria 0001

Mr. Johan Marais
P.O. Box 414
Bothas Hill
3660

Participation in the study group will be open to all progressive producers and crocodilian enthusiasts. Should you be interested in joining the group, kindly write to the above address for an application form.

PROJECTS

BIOCHEMICAL SYSTEMATICS AND POPULATION GENETIC STRUCTURE OF
DESERT LIZARDS, GENUS Meroles

D.H. Gordon
Department of Evolutionary Biology
Transvaal Museum, P.O. Box 413, Pretoria, 0001

Aim: To undertake a protein electrophoretic survey of genetic variability in six species of Desert Lizard, genus Meroles, which occur in the western arid regions of southern Africa. The genetic data will be used to assess population genetic structure, to identify morphologically cryptic species and to resolve phylogenetic relationships within the group.

Background: The Lacertid genus Meroles occurs in the central Karoo, little Namaqualand and extends north to southern Angola along the coast of South Africa and Namibia. The species group includes both terrestrial (sand to gravel plains) and psammophilous members and shows a range of adaptations to a sand habitat such as flattened, wedge-shaped to rounded snout and a serrated fringe on the toes. Two terrestrial species, knoxii and suborbitalis, have localized, isolated populations due to Namib dune barriers. Variation in clutch size has been noted for knoxii. Both these aspects warrant a genetic perspective of population structure, as the isolated populations may have speciated and the variation in clutch size may be indicative of a complex of cryptic species.

Questions:

- 1). What are the phylogenetic relationships of the six Meroles species? Are knoxii and suborbitalis ancestral to the more specialized species associated with dune habitat? What is the speciation history of the group?
- 2). Do the patterns of genetic divergence give any insight into the age and geomorphological change of the Namib Desert?
- 3). What is the population genetic structure of suborbitalis and knoxii? Are these discontinuities in genetic variation which indicate the presence of previously undescribed species or a complex of cryptic species? How divergent are the isolated populations of knoxii and suborbitalis with respect to the main populations?
- 4). How divergent genetically are the discontinuous populations (from the Luderitz and Walvis Bay areas) of micropholidotus?
- 5). What pattern of genetic variation is found in the main coastal population of reticulatus compared to the small isolated coastal populations and those isolated populations found in the Hauchab mountain, Sylvia Hill, Oyster Cliff areas? What do these patterns indicate about geomorphological events in the Namib?

- 6). How does the genetic structure of reticulatus which has a very narrow linear distribution compare with that of suborbitalis which has a broad distribution and larger population size?
- 7). Is the variation in colour and intensity found in cuneirostris clinal or correlated with discontinuities in gene flow?

Associated projects:

- 1). Survey of chromosome morphology and variation in Meroles spp.
- 2). Adaptations of integument and limbs to different environments (in cooperation with S. Hanrahan, Dept. of Zoology, University of the Witwatersrand).

Material needed: Live specimens are required for protein electrophoretic studies. As this project is a population study, 10 or more specimens are needed per locality; localities should be representative of the species range and include isolated populations.

PROJECTS CURRENTLY UNDERWAY IN ZIMBABWE

Dr. Donald Broadley is at present busy with the following projects:

- 1). A reappraisal of the genus Panaspis, with the description of a new species of Leptosaiiphos from Tanzania.
- 2). A checklist of the reptiles of Tanzania, with synoptic keys. (With Kim Howell of the University of Dar Es Salaam).
- 3). A revision of the savanna species of Kinixys (a preliminary review, reinstating K. spekii and K. lobatsiana as full species appeared in the September part of the IUCN "Operation Tortoise" report). Dr. Broadley will be making a careful scrutiny of osteological characters and will be grateful for any shells or skeletal material of Kinixys natalensis that anyone can supply!

H.A.A. SYMPOSIUM

The committee of the Herpetological Association of Africa is at present investigating the possibility of having a major herpetological symposium towards the second half of 1990.

Should a member have any comments or suggestions, please contact a committee member.