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AFRICAN HERP NEWS

NO. 25: OCTOBER 1996

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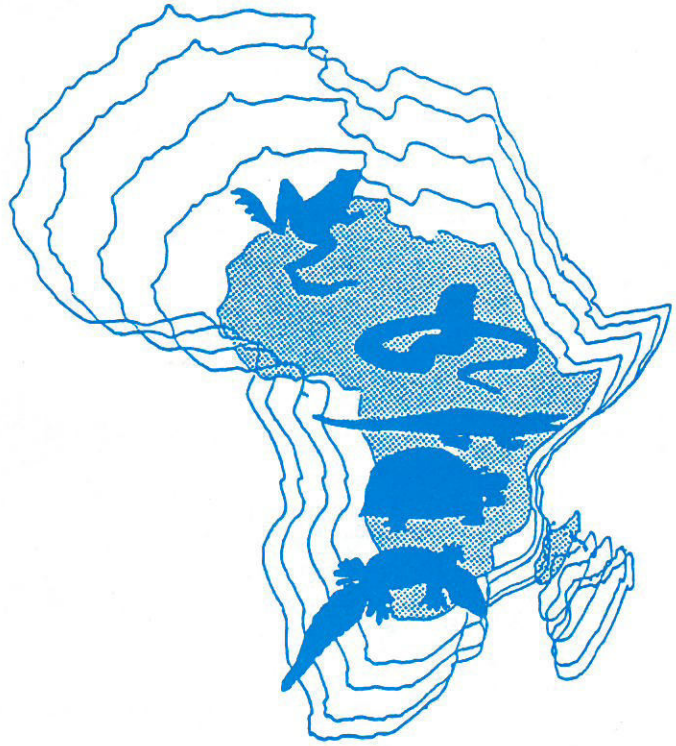
AFRICAN HERP NEWS

HERPETOLOGICAL ASSOCIATION OF AFRICA NEWSLETTER



OCTOBER 1996 NO. 25

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 Association's journal, *African Journal of Herpetology* (which publishes review papers, research articles, short communications and book reviews - subject to peer review) and newsletter, *African Herp News* (which includes short communications, life history notes, geographical distribution notes, venom and snakebite notes, short book reviews, bibliographies, husbandry hints, announcements and news items).

Editor's note:

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

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

Articles may be submitted for peer review (at least two reviewers) at the Editor's discretion. Lists of reviewers will be published in the newsletter from time to time.

Articles and news items appearing in *African Herp News* may be reprinted, provided the author's name and newsletter reference are given.

Typists:
Ms H. de Villiers & Ms A. Lombaard, National Museum, Bloemfontein.

COMMITTEE OF THE HERPETOLOGICAL ASSOCIATION OF AFRICA

EDITORIAL

I must start by apologizing for the late appearance of this issue of *African Herp News*. The delay was mainly the result of our regular newsletter typist leaving the National Museum - after typing and formatting about half the newsletter - and there being no other typists available until very recently.

A large part of this newsletter is dedicated to the proceedings of the *Fourth H.A.A. Symposium on African Herpetology* held at St Lucia from 22 to 27 October 1995. As was the case with our previous symposia, this one was a great success! Various speeches and reports by office bearers, and some selected abstracts and photographs, are included in this issue of *African Herp News*.

Also included in this issue is *A history of the Herpetological Association of Africa* by Don Broadley. I must thank Don for his willingness to undertake the time-consuming task of preparing this document, but I have no doubt that it will be read with great interest by most, if not all, H.A.A. members.

A special mini-symposium, *Africa - the neglected continent: Biodiversity and Biology of the African Herpetofauna*, will be held as part of the *Third World Congress of Herpetology* in Prague, 2-10 August 1997. More about this interesting meeting, convened by Bill Branch, can be found on pages 2 and 3.

H.A.A. members will also be interested in the recently initiated *Southern African Frog Atlas Project* (SAFAP). Your participation in this project is requested - see pages 53 to 56.

Members can look forward to three more H.A.A. publications in the next few months. The next issue of *African Journal of Herpetology* should be posted by the end of the year, the next *African Herp News* will be ready early next year and there is also the possibility that the *Proceedings of the Third H.A.A. Symposium* (Pretoria, 1993) will appear soon.

I wish to apologize to the authors of the popular *Recent African Herpetological Literature* series for not including part 17 in this newsletter. Owing to the many pages dedicated to the proceedings of the St Lucia symposium, it would have meant a very bulky newsletter had the rather lengthy literature list been included. Part 17 in the series will be published in the next issue of *African Herp News*.

A limited number of copies of the revised (1996) H.A.A. Constitution were recently printed. The booklet is bound with a firm cover and is available to members on request. If you are interested, contact the Secretary/ Treasurer.

According to Para 9.2 of the H.A.A. Constitution the Chairman is elected every two years, holds office for two years, and may not hold office for more than six consecutive years. I have now held the post of Chairman/Newsletter Editor for over six years (because of delays due to postal voting) and will therefore not be available for re-election when the next elections are held during the first half of 1997. **This newsletter is therefore my penultimate one and I call on members to write to me if they are prepared to stand for nomination as Chairman/Newsletter Editor in the 1997 elections.** While ready access to a computer as well as some skill in editing are not prerequisites, they would most certainly make the candidate's work a lot easier.

The following persons (listed alphabetically by surname) are thanked for reviewing Short Communications published in this and the previous issue of *African Herp News*: Aaron Bauer, Bill Branch, Rod Douglas, Wulf Haacke, Neil Heideman and Angelo Lambiris.

Finally, thank you all for your contributions and keep sending them.

All the best.

Mike Bates
Chairman/Newsletter Editor

GENERAL MEETING AT ST LUCIA AND AMENDMENT TO H.A.A. CONSTITUTION

Quorum at General Meeting

At the General Meeting held during the *Fourth H.A.A. Symposium on African Herpetology* at St Lucia, KwaZulu-Natal on 24 October 1995, only 28 African H.A.A. members were present. This is two less than the quorum of 30 required by the H.A.A. Constitution in order to constitute an official gathering.

In *African Herp News* No. 24 I appealed to all H.A.A. members who did not attend the General Meeting to indicate whether or not the Minutes (see pages 4-6 of *African Herp News* No. 24) and proposals contained therein were acceptable to them.

Seven H.A.A. members responded, all positively, and the General Meeting and all proposals made at it are thus considered "official".

Amendment to H.A.A. Constitution

In order to avoid the problem of not having a quorum at General Meetings, as was the case at both the Pretoria (1993) and St Lucia (1995) symposia, a proposed amendment to the H.A.A. Constitution was presented on page 3 of *African Herp News* No. 24.

Eight H.A.A. members responded and all agreed to the amendment, which has therefore been accepted and applied to the revised 1996 constitution.

The H.A.A. Constitution has been amended as follows:

Para 13.1 At any General Meeting a quorum shall be 30 Members.

amended to

Para 13.1 At any General Meeting a quorum shall be one-third of the total number of Members registered as delegates.

THIRD WORLD CONGRESS OF HERPETOLOGY: MINI-SYMPOSIUM

As part of the proceedings of the Third WCH, to be held in Prague, 2-10 August 1997, it is proposed to host the following one-day symposium:

AFRICA - THE NEGLECTED CONTINENT
BIODIVERSITY AND BIOLOGY OF THE AFRICAN HERPETOFAUNA

Convenor: Dr W.R. Branch, Curator of Herpetology, Port Elizabeth Museum, P.O. Box 13147, Humewood 6013, South Africa
(Tel. 041 - 561051; Fax 041 - 562175; E-mail, pemwrb@zoo.upe.ac.za)

Africa remains the neglected continent. Containing the majority of the world's poorest countries, indigenous research is severely curtailed by financial constraints, regional conflicts and a deteriorating infrastructure. Pressure from the burgeoning human population has led to land use conflicts and has resulted in widespread habitat destruction. The rapid decline of mega-mammals pre-occupies world and African conservation bodies, with the consequent neglect of herpetofauna. The diverse and largely unique herpetofauna remains relatively unknown and unmapped. The aims of the proposed symposium are to: synthesize existing knowledge on the composition, distribution and biology of the continent's herpetofauna; to identify and prioritize areas and taxa in need of study and conservation; and to stimulate international collaboration between herpetologists and other interested groups.

Anyone interested in participating in the above symposium is asked to contact the convenor as soon as possible. Due to limited time, talks should review aspects of relevance to the broad theme of the symposium.

FOURTH IBERIAN HERPETOLOGICAL CONGRESS

OPORTO

5-8 DECEMBER 1996

For further information contact:

Departamento de Zoologia e Antropologia
Faculdade de Ciências da Universidade do Porto
Praca Gomes Teixeira
4050 PORTO
PORTUGAL

Tel. - 351 2 310290
Fax. - 351 2 2004777
E-mail - herpet96@fc.up.pt
http://fc1.fc.up.pt/~herpet96/congress.html

15TH MEETING OF THE WILLI HENNIG SOCIETY

UNIVERSITY OF CAPE TOWN

15-20 DECEMBER 1996

General theme and structure: HENNIG-15 is aimed at developing cladistics in South Africa and at addressing major theoretical and empirical issues currently being debated in the systematics/evolution literature. These aims will be achieved by discussing and debating views expressed in symposium-, contributed- and poster sessions.

Symposia: The following symposia are planned (the deadline for additional suggestions is 15 May 1996):

1 Basal evolution of Angiosperms
2 Analysis of large data sets
3 Species concepts
4 Testing phylogenies

5 Molecular systematics
6 Various workshops on computerized cladistics

Registration and **Abstracts** to be sent to Associate Professor Tim Crowe at UCT by **1 August 1996.**

For further details and copy of 1st circular, contact Rick Nuttall (National Museum, P.O. Box 266, Bloemfontein 9300, South Africa).

FOURTH H.A.A. SYMPOSIUM ON AFRICAN HERPETOLOGY

BIODIVERSITY AND CONSERVATION OF AFRICAN HERPETOFAUNA

23-27 October 1995
St Lucia

* * * * * *

REPORT BY THE CHAIRMAN OF THE ORGANIZING COMMITTEE

O. Bourquin

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

Details of the first three H.A.A. symposia, held in Stellenbosch (1987), Bloemfontein (1991) and Pretoria (1993) have been outlined in previous H.A.A. journals and newsletters. The fourth symposium was held at St Lucia, KwaZulu-Natal, the venue being the Natal Parks Board theatre in its control office complex. It ran from 22nd to 27th October 1995. The overall symposium theme was "Biodiversity and Conservation of African Herpetofauna". Forty-five papers, four slide-shows, one video and 14 posters were presented.

The opening and welcome was given by Dr G.R. Hughes, Chief Executive of the Natal Parks Board.

The presentations were grouped (roughly) into diversity, distribution and status of herpetofauna, which included an excellent presentation by the guest speaker, Prof. R.C. Tinsley; taxonomy and phylogeny; biology and behaviour, and conservation (including uses made of herpetofauna). Presentations were stopped at hourly intervals with 15 minute breaks, or by normal tea and luncheon breaks. This helped towards a relaxed symposium with plenty of time for discussion, chatting or general goofing-off! The four slide shows presented were of high quality and interest value, and an unscheduled film *Toadskin Spell* proved to be excellent viewing.

A discussion dealing with conservation matters was held at the end of the symposium.

A good mix of countries (U.S.A., Germany, Great Britain, South Africa, Zimbabwe, Swaziland, Namibia, Botswana and Tanzania) were represented, with at least one representative from each country outside South Africa contributing a paper to the symposium.

Social activities (scheduled) included an ice-breaker, a braai, a frog-twitching session, a trip on the 80-passenger double-decker tourist boat and a night drive to view game. Unscheduled activities, those that can be mentioned, included bird-watching, herp hunting, fishing and prawn-eating (P.S. Where are the records of herps???).

An A.G.M. and an H.A.A. Committee meeting were held, and it may be said that both passed with relative decorum and non-violence.

No awards were made for Exceptional Contributions to African Herpetology.

The Natal Parks Board kindly hosted the event, supplying the theatre, an office and free access to the eastern shores and the crocodile centre; by donating reedbuck for the braai and by financing the ice-breaker event. A generous discount for the trip on the 80-passenger *Santa Lucia* was also given.

I must thank the members of the organising committee for their (essential) input during the year preceding the symposium. Frank Farquharson and Dave Blake were veritable T-Rex's with Lynn Raw and Toy Bodbijl taking up the slack. Staff of the Natal Parks Board were stars. Without the extensive cheerful secretarial and administrative work by Michelle Hamilton the symposium would not have happened, and the enthusiastic and professional assistance by the St Lucia NPB staff was wonderful and I thank Mr and Mrs Johan Gerber and Johan's mother; Isabelle Woods, Jone Porter and her team, Andy Blackmore, Carl Freer and his team, Dave Blake and his team. A special thank you to Minnie Forrest for the excellent food!

The symposium logo was designed by Mark Coetzee (Natal Parks Board) who also arranged the T-shirt production. Adams Bookstore provided books for sale, while numbers of other items were on offer from a number of different people, including books, T-shirts, jewellery, philatelic items and badges - all these providing an interesting range of herpetological thingies to browse through, whistle-at-prices and, on occasion, actually buy. The only thing removed without payment was one of my beers - a deadly error, and the thirsty thief owes me one.

Finally, I thank the chairmen for their work, and the presenters of papers, slide-shows and posters - your efforts were appreciated and appreciable! **Please try and submit as many of the papers as possible to our Journal - we need your input!**

P.S. We came out in the black as far as finances were concerned!

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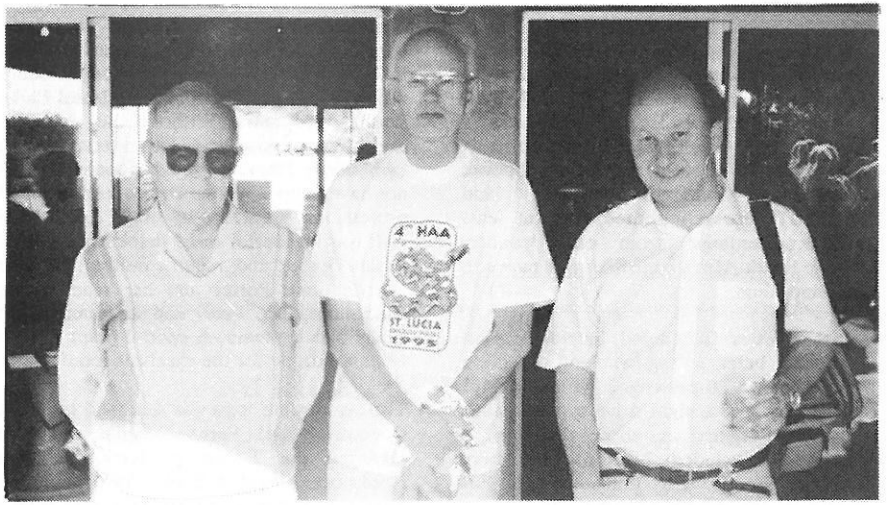

From left to right: Dr Donald Broadley (Biodiversity Foundation for Africa, Bulawayo), Prof. John Poynton (London) and Prof. Richard Tinsley (University of Bristol). Dr Broadley and Prof. Poynton were the first recipients of the H.A.A.s *Exceptional Contribution to African Herpetology* award (Bloemfontein, 1991) and Prof. Tinsley was Guest Speaker at the St Lucia symposium, presenting a paper entitled *Diversity, geographical distribution and general biology of the genus* Xenopus. *(Photo: M.F. Bates)*

From left to right: Dr Louis du Preez (formerly National Museum, Bloemfontein), Prof. Richard Tinsley (University of Bristol) and Dr Johan Welman (National Museum, Bloemfontein) awaiting departure on the *Santa Lucia* cruise boat. *(Photo: M.F. Bates)*

SELECTED PAPER AND POSTER ABSTRACTS

In *African Herp News* No. 23 (pages 2 to 7) a list of titles for papers and posters was presented. What follows is a selection of paper and poster abstracts which may be of special interest to those who did not attend the symposium.

Papers

CONSERVATION STATUS OF THE HERPETOFAUNA OF THE WESTERN CAPE PROVINCE, SOUTH AFRICA

(Baard, E.H.W., Western Cape Nature Conservation, Private Bag 5014, Stellenbosch 7599, South Africa)

At least 139 non-marine reptile and 43 amphibian taxa are known to occur in the Western Cape province of South Africa. Fourteen reptiles (10%) and 19 amphibians (44%) are endemic to this region, while four "endangered", four "vulnerable", four "rare" and 11 "restricted" taxa are listed in the current South African Red Data Book for Reptiles and Amphibians. Habitat destruction remains the major cause of the deteriorating status of many taxa, especially those occurring in lowland habitats. Many taxa (approximately 35%), however, are in a more favourable position in that they occur in relatively high-lying, non-arable terrain (including mountains and hills) where habitat destruciton is not as severe as in low-lying habitats. Declared mountain catchment areas and conservation areas enhance their survival in these habitats. Monitoring of threatened taxa continues and steps are being taken to re-evaluate the herpetofauna of the Western Cape province according to the new IUCN Red List Categories. However, the lack of population status data, as well as poor knowledge about species' ecology, even of the more common taxa, impedes effective evaluation of the conservation status of the majority of taxa. Conservationists therefore need the support of researchers to aid in this process.

DISTRIBUTION AND DIVERSITY OF AMPHIBIANS AND REPTILES IN LESOTHO

(Bates, M.F., Department of Herpetology, National Museum, P.O. Box 266, Bloemfontein 9300, South Africa)

The herpetofauna of Lesotho is poorly known. In order to provide a basis for future surveys, lists of material in southern African museums and private collections were obtained, specimens examined where available, and lists of new localities and literature records compiled. All localities were checked on the 1:50 000 topocadastral map series for Lesotho and a gazetteer compiled. The distributions of all taxa (species and subspecies) were plotted on maps using the quarter-degree grid and locus code method. A total of 23 frog, 18 lizard and 19 snake taxa occur in Lesotho. Literature records indicated that an additional 7 frog, 23 lizard and 11 snake taxa occur near the borders of Lesotho, many of which are likely to occur in the country. New records extend the known range of several taxa, including *Rana vertebralis*, a Red Data

Book species now known to be widely distributed in the mountainous parts of Lesotho. Two additional RDB species, namely *Rana dracomontana* and *Pseudocordylus langi*, occur in Lesotho. The best represented genera are *Bufo* (five species and subspecies), *Rana* (four species), *Mabuya* (four species), *Pseudocordylus* (three species) and *Stronglylopus* (three species). The number of taxa collected within each of the 64 quarter-degree units covering Lesotho was determined, indicating that the southern part of Lesotho is the most poorly sampled area. For amphibians 0-11 taxa (11 in the Maseru area) have been recorded per unit, while 0-14 reptile taxa (14 in the Morija area) have been recorded per unit. Twenty-one amphibian and reptile taxa have been recorded for the Maseru area. Amphibians have been collected in 56% of all units and reptiles in 64% of units. For both amphibians and reptiles, 72% of units have been collected (*i.e.* one or more taxa recorded), but 58% of all units have 10 or less taxa recorded. While several taxa appear to be widely distributed in the country, some appear to be restricted to the Western Lowlands (six taxa - three amphibians, three reptiles), Central and Eastern Highlands (12 taxa - eight amphibians, four reptiles) or Afro-alpine - Natal Drakensberg area (*Pseudocordylus spinosus, P. langi* and *Tropidosaura cottrelli*).

DECLINING AMPHIBIANS AND THE SOUTHERN AFRICAN FROG ATLAS PROJECT

(Bishop, P.J., Department of Zoology, Wits 2050, South Africa)

There are just over 100 species of frogs in southern Africa, of which 47% are endemic to the region. Four species were listed as "endangered" in the 1988 Red Data Book on threatened Reptiles and Amphibians and may have disappeared altogether by now. In order to determine the current status of our frog populations and to reach a better understanding of the threats facing them, a Southern African Frog Atlas Project (SAFAP) has been initiated. The aim of the project is to compile a complete list of species for each quarter-degree grid cell in South Africa, Swaziland and Lesotho, and to determine which species are protected within our existing reserves. This will enable the conservation status of each species to be determined and will provide baseline information for future monitoring projects. The project will involve many volunteers, who will submit site records based on recorded calls, specimens and visual identifications to the co-ordinator for analysis and computerisation. The SAFAP will radically improve our understanding of frog distributions and will focus attention on declining populations.

APPROACHES TO THE CONSERVATION OF TANZANIA'S AMPHIBIANS AND REPTILES

(Howell, K.M., Department of Zoology and Marine Biology, P.O. Box 35064, University of Dar-es-Salaam, Dar es Salaam, Tanzania)

Tanzania has a rich herpetofauna, with high levels of species diversity and endemism. Much of the diversity and endemism is found in closed forest, a habitat which is poorly represented in the national park network. Aside from the need to improve the level of protection to closed forest and other habitats, conservation issues include the need to better manage and protect marine chelonian populations and breeding

sites, improved management of crocodile ranching operations and wild populations, and the development of a policy which adequately controls capture and export of live amphibians and reptiles. New species of amphibians and reptiles are still being discovered in even relatively well-studied areas, and there is a need for surveys of as yet unexplored areas as well as detailed studies on populations in others. Management and enforcement staff would benefit from increased exposure to information on amphibians and reptiles; importance of regional co-operation in research and management is discussed.

THE PLIGHT OF THE AFRICAN DWARF CROCODILE IN THE CONGO

(Huchzermeyer, F., Agricultural Research Council, Onderstepoort Veterinary Institute, Private Bag X5, Onderstepoort 0110, South Africa)

Live-caught African dwarf crocodiles are brought to urban markets in the Congo and slaughtered for their meat. In addition to a survey of parasites and pathological conditions initiated in 1993, slaughter and marketing conditions, hunting methods and the state of their habitat in a previously unexplored swamp forest area in the northern Congo were investigated in April-May 1995. It was found that their habitat is more restricted than was previously thought. Against this background, the large-scale commercial exploitation of the dwarf crocodile as practised in the Congo is of very grave concern.

TEMPERATURE DEPENDENT SEX DETERMINATION IN ST LUCIA NILE CROCODILES: A PRELIMINARY INVESTIGATION

(Leslie, A.J.[1], Kamp, S.J. & Spotila, J.R.[2]
[1]Crocodile Research, P.O. Box 228, St Lucia 3936, South Africa
[2]Department of Bioscience and Biotechnology, Drexel University, Philadelphia, United States of America)

The factors controlling sexual differentiation in crocodilians are unknown, but heteromorphic sex chromosomes are absent from all species. The sex of *Crocodylus niloticus* was shown to be determined by the temperature of egg incubation in constant temperature and in shift temperature laboratory experiments. Temperature shifts from 32°C to 33°C and *visa versa* were conducted at varying times during the incubation period in order to define the thermosensitive period (TSP). The duration of the incubation period varied with temperature and was 74 days at 33°C, increasing to 87 days at 31°C. Preliminary results indicate that the TSP pattern is female-male-female; females are produced at low and high incubating temperatures, with males produced at intermediate temperatures. The shading effect of *Chromalaena odorata*, an alien plant found to be invading crocodile nesting sites in the Lake St Lucia area, may thus be reducing nest temperatures and hence altering the sex ratio of crocodile hatchlings entering the lake ecosystem.

HOME RANGE OF *GEOCHELONE PARDALIS* AND *CHERSINA ANGULATA*: TWO SYMPATRIC GENERA IN THE EASTERN CAPE, SOUTH AFRICA

(Mason, M.C.[1], Weatherby, C.A.[2]
[1]Zoology Department, University of Port Elizabeth, Port Elizabeth 6000, South Africa
[2]Biology Department, Adrian College, Michigan, United States of America)

The home ranges of 10 *Geochelone pardalis* and seven *Chersina angulata* were determined over a nine-month period in the Addo district of the Eastern Cape, South Africa. Home ranges were determined using radiotelemetry and the Ranges IV software package. The mean home range size of *G. pardalis* was 57,56 ha (S.E. = 79,17, range = 7,94 - 213 ha, n = 10). Males had a significantly smaller mean home range size than females (23,02 ± 12,59 ha [n = 4] for males compared to 80,59 ± 27,92 ha [n = 6] for females). Mean distance moved per day was also different in males and females, males tending on average to move further per day than females (92,61 ± 19,67 m/day for males and 76,97 ± 27,92 m/day for females). Mean home range size of *C. angulata* was 2,49 ha (S.E. = 3,34, range = 0,08 - 8,99 ha, n = 7). Males tend to have a smaller mean home range than females, although the sample size is too small to be certain (0,32 ± 0,35 ha for males [n = 2] and 3,36 ± 3,66 ha for females [n = 5]). Again, on average males tend to move further per day than females (18,27 ± 11,11 m/day for males and 14,98 ± 6,11 m/day for females). The significance of the differences between males and female movements and home ranges in these two species are discussed as well as home range overlap and its relevance to competition.

EVOLUTIONARY HISTORY OF THE AFRICAN CORDYLID LIZARDS: A COLD ORIGIN

(Mouton, P. le F.N. & Van Wyk, J.H., J. Ellerman Museum and Department of Zoology, University of Stellenbosch, Private Bag X1, Matieland 7602, South Africa)

The evolutionary history of the Cordylidae can be derived from the hypothesized phylogeny for the family and the life history transformations association with the major branching events. A cladogram fitted onto southern Africa shows that diversification proceeded from the south-western tip of Africa to the north-east. Life history changes marking the Gerrhosauridae/Cordylidae divergence all point to a cold origin for the Cordylidae. The set of events associated with the origin of the cold Benguela Current off the west coast of southern Africa during Oligocene and Miocene times is hypothesized to have been the major driving force in the evolution of the family. The Cape Folded Mountains served as recipient of the cool-adapted, ancestral *Pseudocordylus* stock which originated on the lowlands, and colonization proceeded slowly eastwards along the mountains. On at least two occasions the lowlands were re-colonized, events which were characterized by the proliferation of species and which led to the origin of the genera *Cordylus* and *Platysaurus*, respectively. Both re-colonizations were characterized by major life history transformations. Various ways of testing the underlying assumptions of the hypothesis are discussed.

A STATUS REPORT ON THE WORLD TRADE IN CHAMELEONS

(Tilbury, C., Debswana, Jwaneng Hospital, Private Bag 08, Jwaneng, Botswana)

Over the nine year period 1985-1993 data collected by the World Conservation Monitoring Centre in Cambridge, United Kingdom, indicates that in excess of a quarter of a million specimens of chameleon have found their way into the international pet trade. This figure only includes those whose trade has been sanctioned by CITES. All species of chameleon were intended to have been protected under Appendix II of the CITES agreement, although two genera (*Brookesia* and *Rhampholeon*) were erroneously excluded by an oversight. An analysis of the data provided shows that the trade has increased exponentially in both total numbers traded and the variety of species being exported - more than 65% of which goes to the United States of America. Data on the effects of removing large numbers of specimens from the wild on population dynamics of the various species is lacking - contrary to the terms of the CITES agreement to sanction trade. It is suggested that at least all those species of chameleons which have restricted distributions, particularly relict forest biotopes, be placed on the CITES Appendix I list as an interim measure until the field studies have been completed or show evidence that home populations of chameleons can be sustained in spite of collecting. This should include all species of *Rhampholeon* and *Brookesia*. This action will aid in creating awareness of the problem and hopefully promote the preservation of these relict forests. Some truly endangered chameleons include *Rhampholeon chapmani, R. gorongosae, R. temporalis, Brookesia perarmata, Chamaeleo laterispinis* and *C. eisentrauti*.

SEXUAL DIMORPHISM IN THE LARGE-SCALED GIRDLED LIZARD, *CORDYLUS MACROPHOLIS*, AND ITS ASSOCIATION WITH THE SUCCULENT, *EUPHORBIA CAPUT-MEDUSAE*

(Wright, K, & Mouton, P. le F.N., Ellerman Museum, Department of Zoology, University of Stellenbosch, Private Bag X1, Matieland 7602, South Africa)

Wherever their ranges overlap the Large-scaled Girdled Lizard *Cordylus macropholis* uses the succulent *Euphorbia caput-medusae* as a microhabitat. A population of *C. macropholis* was studied at Lambert's Bay on the west coast of South Africa. A sample of 200 lizards from equally as many plants provided details of this lizard's association with the *Euphorbia* plant, as well as on population structure and sexual dimorphism. In the study area *C. macropholis* was found exclusively in *Euphorbia*. The number of lizards per plant ranged from 0-5, but in most cases was one or two. Plant size and the quality of cover offered were the main determinants of lizard numbers. In 23 cases two or more adult females inhabited the same plant, while in only three cases were two males found together. The adult sex ratio for the population is highly female biased. Females also reach larger asymptotic body sizes than males. No statistical difference in the rate of increase in head size was noted between the sexes. A very low scar frequency was recorded for the species when compared with rupicolous species. Males have significantly more femoral glands than females. Seemingly active generation glands are already present in neonates of both sexes.

Poster

ANURA OF THE KHATSE DAM REGION, LESOTHO

(Van Dijk, D.E., c/o Zoology Department, University of Stellenbosch, Stellenbosch 7600, South Africa)

Seven species of Anura are recorded from the region of the Khatse Dam in north-central Lesotho, east of the Maluti Mountains. They were identified as: *Xenopus laevis* (Pipidae); *Heleophryne natalensis* (Heleophrynidae, tadpoles only); *Bufo gariepensis* and *B. rangeri* (Bufonidae); *Rana vertebralis, R. dracomontana*, and (tadpoles and recorded call only) *Strongylopus* cf. *grayii* (Ranidae).

REPORT OF THE CHAIRMAN

M.F. Bates

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

The present H.A.A. Committee has served since November 1992. The 1995 elections took place a little later than would normally have been the case because the newsletter was used as a means of sending notices rather than posting notices separately to members. This allowed the H.A.A. to make substantial savings on postage. A report on the results of the election will be read by Rod Douglas later on during this meeting.

I would like to start by expressing my gratitude to Frank Farquharson for the excellent job he has done as Secretary and Treasurer since the middle of 1991. The Association's finances were in a rather delicate state a few years ago, as the result of the very high costs involved in the production of Journal 38, but we now have a healthy bank balance, as Frank will no doubt inform you in his report. I would also like to thank le Fras Mouton, who took over from Bill Branch as Journal Editor at the end of 1993, and has produced high quality journals. All Additional Committee Members are also thanked for their valuable input.

As the membership of the H.A.A is geographically widely distributed, and because we are not able to hold regular meetings, the Association's success can probably be determined, to a great extent, by the frequency, content and quality of its publications. In this regard I feel we have been fairly successful during the past few years, maintaining an average of two newsletters and two journals per year.

As has been the practice for several years now, communication between committee members has been in the form of letters, faxes and telephone calls. No special committee meetings were deemed necessary during the term of the current committee. Decisions on important matters are taken on the basis of a majority vote.

I will now mention a few of the more important matters dealt with by the present Committee.

i) Changes to the format, style and content of the Journal were discussed, including the transfer of Life History Notes, Geographical Distribution Notes and Venom and Snakebite Notes from the journal to the newsletter. This will be dealt with in more detail in le Fras Mouton's report.

ii) After a somewhat lengthy delay I was able to secure a R3 000-00 donation from ESKOM for a special symposium proceedings publication which will contain extended abstracts of papers and posters presentated at the *Third H.A.A. Symposium on African Herpetology* held at the Transvaal Museum in 1993. ESKOM treated delegates to the Pretoria symposium to a day at the Majuba Power Station reserve where Sungazer lizards are being protected and conserved. As many of you will know, authors have already been requested to send abstracts to Hannes van Wyk at the University of Stellenbosch, who has agreed to act as Editor. This special issue of the journal is due out at the end of the year.

iii) The committee also made suggestions regarding the hosting of this symposium, and selected two guest speakers from a list of proposed candidates.

iv) An *Exceptional Contribution to African Herpetology* award was presented to Dr Raymond Laurent in his absence during the Pretoria symposium. The award has since been posted to him. I would like to mention, at this time, that no proposals for candidates for this award were received prior to this symposium, and the award will therefore not be presented this year.

v) The committee voted in favour of a $50-00 donation from H.A.A. funds to the *Declining Amphibian Populations Task Force,* which had requested financial assistance.

vi) All excess T-shirts produced for the Bloemfontein and Pretoria symposia were sold.

The H.A.A. can be truly proud of the symposia it has presented thus far. Our first major symposium was held at Stellenbosch University in 1987. This was followed by a symposium at the National Museum in Bloemfontein during 1991, and our previous symposium at the Transvaal Museum in Pretoria during 1993. A reptile husbandry symposium was also held at Delta Park, Johannesburg, in 1988. All have been great successes and the present meeting is proving to be no exception.

On behalf of all delegates at this symposium, I wish to thank Orty Bourquin, his team of co-wokers and all others involved for presenting a most enjoyable and successful symposium. Let's hope that the next H.A.A. symposium will be as much of a success as this one has been.

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REPORT OF THE NEWSLETTER EDITOR

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Since our last symposium in Pretoria four issues of the newsletter, *African Herp News*, have been produced, namely numbers 20 to 23. These have ranged in length from 40 to 76 pages each.

Following the transfer of the Life History, Geographical Distribution, and Venoms and Snakebite sections from the journal to the newsletter, it has in fact been difficult not to produce a bulky newsletter. I must add, however, that I have always been fortunate to have had more than adequate material for every issue of the newsletter.

I am thankful to all contributors of articles and news items, including the various members of the H.A.A. Committee. It is, however, somewhat unfortunate that so few reptile husbandry papers, and venoms and snakebite notes, have been submitted.

There are obviously certain types of articles which are not suitable for the journal, but these can usually be accommodated in the newsletter. I have often said that even very short life history notes are valuable, since they often represent the only available information on certain aspects of a particular species. This is borne out by the regular citation of H.A.A. short notes in research papers and university theses.

As far as the financial side of the newsletter is concerned, it is produced at fairly low cost to the Association. The most recent issue, number 23, cost only about R7,70 per newsletter, including printing, postage and other expenses.

Perhaps the main reason for the low costs involved is the fact that our printing costs are comparatively very low. For example, it cost R2 200,00 to have 400 copies of the last newsletter printed, as compared to quotes of R3 000,00 and over R4 000,00 from other printers to produce booklets of a similar quality.

Finally, I urge members to continue supplying me with newsletter contributions.

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REPORT OF THE JOURNAL EDITOR

Le Fras Mouton

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I started my duties as co-opted editor of the Journal in January 1994 and asked Hannes van Wyk, also of the University of Stellenbosch, to act as co-editor. Three issues of the Journal appeared till October 1995. For the sake of continuity, only minor adjustments were made to the format of the Journal. We decided, for example, to divide the journal into definite sections, namely *Reviews, Original contributions, Short communications* and *Book reviews*.

As we are determined that the Journal should appear regularly - this is also one of the requirements for accreditation - we decided that two issues should come out each year and that these should accordingly be numbered as 1 and 2 of the specific volume of that year. In the past, every issue of the Journal was considered a separate volume, now every volume comprises two issues.

Low printing costs at the University of Stellenbosch Printers allowed us to change to semi-glossy paper, which improved the looks of the Journal tremendously.

During the period covered by this report, 18 manuscripts were received for possible publication in the Journal. Of these, six were rejected, in other words a rejection figure of 33%. Three book reviews were also received and accepted for publication. Of the 12 articles accepted for publication, six dealt with taxonomic aspects, one with reproduction, one with population dynamics, one with ecology, one with biogeography, one with parasitology and one with geographical character variation. Only three of the 12 articles dealt with amphibians. All articles were reviewed by at least two referees.

The following persons acted as referees: E.H.W. Baard, W.R. Branch, A. Channing, A.M. Bauer, M.I. Cherry, H. Mushinsky, J.B. Iverson, N. Fairall, D.E. van Dijk, J.H. van Wyk, N.H.G. Jacobsen, W.D. Haacke, G.V. Haagner, D. Frost, H. Geertsema, M.H.C. Visser and O. Bourquin. Alan Channing reviewed no less than five of the 18 manuscripts submitted for publication. In the two cases where I was a co-author in manuscripts submitted, I asked Ernst Baard and Hannes van Wyk to select referees and to make the final decisions about possible publication.

As far as sending out proofs to authors is concerned, the situation is unsatisfactory at the moment. When working towards a deadline, time does not always permit sending out proofs to very distant authors. I apologize for printing errors that occurred which could have been avoided had proofs been sent to these authors. The main problem still is the small number of contributions received, which does not allow any latitude in terms of which issue of the Journal a specific article will appear in. At any particular point in time we need all the articles that had been accepted for publication to appear in the forthcoming issue of the Journal.

We urge all members of the Association to use the Journal as an outlet for their scientific articles. Without the support of the herpetological community of Africa we will not be able to develop the Journal into a high quality publication of international status. We suggest that the name of the Journal be changed and that a more rigorous advertisement strategy is followed to attract more international contributions. A wise step would also be to get more people of

international status onto the Editorial Committee.

As far as accreditation is concerned, it is suggested that we apply for the Journal to be accredited in 1997. At least two issues of the Journal under a new name would have appeared by that time and a more representative editorial committee will be in place.

Finally, I would like to thank all the authors who submitted material for publication during the period under discussion and hope that they will continue to support the Journal in the future. I also thank all the referees for their contributions towards improving the standard of the Journal. The support of members of the Editorial Committee, and Ernst Baard in particular, is greatly appreciated.

REPORT OF THE SECRETARY/TREASURER

F.L. Farquharson

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There has been little change in membership since my last report, with our total membership around 331, 186 being African Members and a further 145 Overseas Members. The number of countries representing the distribution of members has increased to 31, with Portugal being our latest addition. The number of new members joining has slightly exceeded those dropping away.

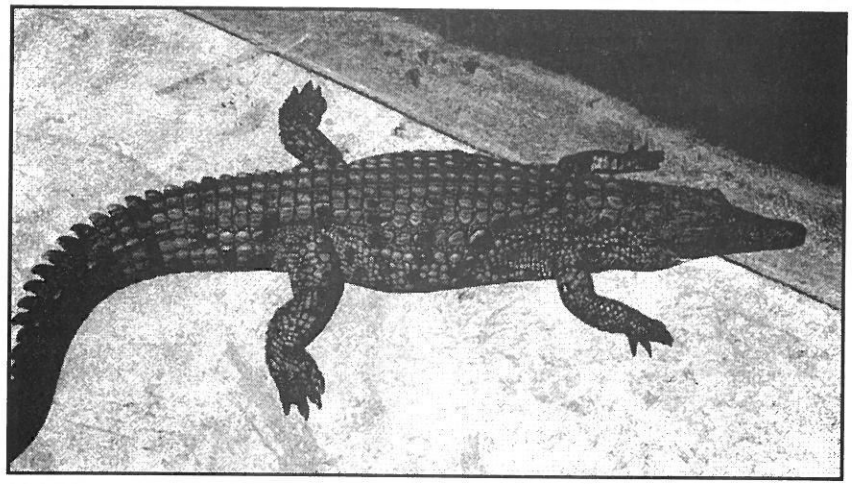
Postage to states in eastern Africa continues to be a problem and must discourage many potential members. Air-mail (letters) appear to get through, but larger envelopes (such as for Journal or Newsletter) just seem to get lost.

Regrettably, members also get "lost", and I have had a surprising amount of mail returned with "GONE AWAY" or "RETURN TO SENDER" on the envelope. Please let me know of any change of address - preferably in ADVANCE.

Concerning the Association's finances, you will have seen in *African Herp News* #21 and #23 the Auditors' Reports for the years ending February 1994 and February 1995 respectively. These, I am pleased to confirm, indicate a healthy state of affairs, with a substantial surplus to see us over any untoward and unforseen difficulties. Because of this we can afford to keep next year's (1996) fees unchanged, but increases in postal tariffs need to be carefully monitored.

We all owe special "thank you"s to the members of the H.A.A. Committee, who have held expenses at remarkably low figures (especially those pertaining to the publishing of our Journal and Newsletter), and also to Wulf Haacke and his Transvaal team who not only provided delegates with stimulating fare but also posted a surplus on the 1993 Pretoria symposium.

Feeding time for subadult Nile Crocodiles (*Crocodylus niloticus*) at St Lucia Crocodile Centre. *(Photo: M.F. Bates)*



Subadult Nile Crocodile (*Crocodylus niloticus*) at St Lucia Crocodile Centre. *(Photo: M.F. Bates)*

A HISTORY OF THE HERPETOLOGICAL ASSOCIATION OF AFRICA

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Although the Herpetological Association of Africa was founded only in 1965, it evolved from the *Herpetological Association of Rhodesia*, which was launched in Bulawayo in October 1957. The eight founder members were myself as Honorary Secretary/Treasurer (and Editor of the Journal), Dave Blake (Hon. Sec., Umtali Branch), Bill Armitage and Sid Warren (both Umtali), Father K. Tasman, S.J. (Monte Cassino Mission, Macheke), Alex Siemers (Prince Edward School, Salisbury), Viv Wilson (Game & Tsetse Control, Fort Jameson, N. Rhodesia) and Ted McCarthy (Luanshya, N.R.).

The first H.A.R. Journal (six roneoed foolscap pages) appeared in November, containing the rearing Banded Cobra badge and motto "Cavemus neque veremur" (we respect but do not fear), list of members, Constitution, "Jottings from Cobra Corner" (my migratory Roads Department camp) and articles on the first (and only) *Dromophis lineatus* taken south of the Zambezi, records of *Naja melanoleuca* from Rhodesia and reports of fatal snake bites from *Dispholidus* (Karl Schmidt) and *Thelotornis* (F.J. de R. Lock).

In J.H.A.R. 2, provision was made for Associate Members outside Rhodesia and a report on the first H.A.R. expedition to Mount Selinda recorded *Naja melanoleuca* from S. Rhodesia for the first time.

In J.H.A.R. 3 (May 1958), the first Associate Members were recorded (S.A.I.M.R. and John Visser), but No. 4 gave a total of 16 full members and 15 Associates - new additions being Desmond Vesey-FitzGerald, Dick Isemonger, Luchi Balarin, Charles Pitman, Vivian FitzSimons, Walter Rose, Chuck Shaw, Roger Conant, Ed Malnate, Jonathan Leakey and John Wood. This issue saw the first article not written by me - a personal case history of an *Atractaspis bibronii* bite by Alex Siemers! New members recorded in J.H.A.R. 5 were Pat Fox and Bill Mitchell, and new associates were Desmond FitzSimons, Ray Parker and Carl Gans.

J.H.A.R. 7 (May 1959), the first to be produced in quarto size, listed John Poynton as a new associate and included a report on my visit to Lake Kariba (which was then filling), which produced the first *Pachydactylus tetensis* to be recorded since Loveridge described it in 1953.

My resignation from the Roads Department to take over as Director of the Salisbury Snake Park in December 1959 led to the first break in the production of a quarterly journal. The next journal (9/10) was a double issue (February 1960) and the first to use coloured paper.

The first General Meeting of the H.A.R. was held at the Salisbury Snake Park on 10 September 1960, but was attended by only 13 members. At this stage the H.A.R. had 44 full members and 37 Associate Members. I left the Snake Park soon afterwards.

J.H.A.R. 14 (February 1961) included the first report of *Hemachatus haemachatus* from Southern Rhodesia. The following issue (June 1961) recorded my appointment as "Assistant Keeper of Zoology" at the Umtali Museum, also including an important article on the biology and behaviour of

Chamaeleo dilepis by Bob Brain, who had just been appointed as Zoologist at the Queen Victoria Museum in Salisbury.

In J.H.A.R. 17/18 (Feb. 1962) the following were made Honorary Life Members of the H.A.R. in recognition of their outstanding pioneer contributions to African herpetology: Dr V.F.M. FitzSimons, Mr A. Loveridge, Captain C.R.S. Pitman, Dr W. Rose and Father K. Tasman. In this issue I first suggested that *Riopa (= Lygosoma) modesta* was conspecific with *sundevallii* and that the larger species of writhing skink in East Africa should probably be called *afer* (Peters).

The second General Meeting of the H.A.R. was held at the Queen Victoria Museum in Salisbury on 25 September 1963, with only nine members attending. In J.H.A.R. 22 it was therefore first proposed that the H.A.R. should expand to become the "Herpetological Association of Africa".

In November 1964, as J.H.A.R. 23 was not yet completed, a special stop-gap H.A.R. Newsletter was produced, in order to circulate a topical "Report on the opportunity for zoological collecting afforded by the Beira-Feruka pipe-line project".

The final number of the J.H.A.R., No. 23/24 (Feb. 1965) was a bumper issue of 58 pages and included an obituary for Walter Rose. With the break-up of the Federation of Rhodesia and Nyasaland, and Rhodesia's Unilateral Declaration of Independence (U.D.I.), less than half the African members were in Rhodesia (21 out of 43), so the case for the metamorphosis of the H.A.R. into the H.A.A. had become overwhelming. In a postal vote the H.A.R. full members voted 21-Nil in favour of the H.A.R. being absorbed into the new H.A.A., with Luchi Balarin returned unopposed as Chairman and myself as Secretary/Treasurer and Editor of the H.A.A. Journal. The following became Honorary Life Members: V.F.M. FitzSimons, A. Loveridge, C.R.S. Pitman, K. Tasman, C.M. Bogert, C. Gans and J.C. Poynton. The new Association had 42 members and 23 associate members when H.A.A.

The first H.A.A. journal appeared in August 1965. In my Editorial I stated: "The Journal is not intended to be a medium for the publication of scientific papers and it should not be quoted in the literature. The object of the Journal is to keep members informed of the latest developments in African herpetology and to allow research workers to discuss their theories and lines of investigation, so that they can enlist the assistance of H.A.A. members who may be able to contribute vital material or observations."

J.H.A.A. 2 was the first to include a "Recent Literature on African Herpetology" section. No. 3 (April 1967) had an unusual bias towards reports on collecting trips, two by John Visser in the Western Cape and two of the most productive Umtali Museum expeditions, one to the Gonarezhou and the other to the south-western Kalahari with the Smithsonian Botswana Mammal Survey.

J.H.A.A. 5 (March 1969) included obituaries for two life members, Father K. Tasman and C.J.P. Ionides, and also my preliminary article suggesting that *Boaedon* was doubtfully distinct from *Lamprophis*. J.H.A.A. 10 (March 1973) saw the switch to A4 format, and in the Editorial of No. 12 I deplored the fact that the H.A.A. Journal was being cited in the *Zoological Record*!

Journal No. 14 (November 1975) was the first to be produced in South Africa, after Vincent Carruthers offered to set up an H.A.A. office in Sandton and handle subscriptions from Africa (excluding Rhodesia) and Europe, which were now a problem following Rhodesia's U.D.I. It included abstracts of the herpetological papers read at the Symposium on Herpetology and Ichthyology held at the Kruger National Park the previous September (13 of these were subsequently published in *Zoologica Africana* 11(2) of 1976) and also the obituaries of Vivian

FitzSimons, Robert Mertens and Charles Pitman.

J.H.A.A. No. 15 (February 1977) was the last that I edited and it was delayed by production problems. At this point I handed over the editorship to Alan Channing who had taken over as Hon. Secretary/Treasurer.

In 1979 Bill Branch became Secretary/ Treasurer. Wulf Haacke took over as Editor in 1980 but handed over to Bill Branch in 1983. With his first Journal (No. 29) Bill launched the first issue of an H.A.A. Newsletter, containing mainly xeroxed material from various sources, on a bi-monthly basis. The status of the Journal itself was upgraded by the introduction of peer review.

In 1985 Rod Douglas took over as Secretary/Treasurer and J.H. van Wyk as Newsletter Editor. In J.H.A.A. 31 the "Geographical Distribution" section was introduced, using the same format as that found in *Herpetological Review*, the newsletter of the SSAR. This was followed in the next journal by provision for sections for "Life History Notes" and "Venoms and Snakebite". Johan Marais became Chairman and Newsletter Editor in 1988.

A great landmark was the successful organisation by Le Fras Mouton and colleagues of the first H.A.A. Symposium at the University of Stellenbosch from 30 March to 2 April 1987. This was attended by more than 70 delegates, with 42 papers and posters presented. The proceedings were published in J.H.A.A. 36 (August 1989).

J.H.A.A. 34 (November 1988) was noteworthy because it contained a Provisional and Annotated Checklist of the Herpetofauna of Southern Africa, edited by Bill Branch, with Baard, Haacke, Jacobsen, Poynton and Broadley as subeditors.

New H.A.A. office bearers from 1990 were Mike Bates (Chairman and Newsletter Editor), Rod Douglas Secretary/ Treasurer), Bill Branch (Journal Editor) and Richard Boycott (Journal Subeditor), but Frank Farquharson took over as Secretary/Treasurer in 1991. Mike Bates renamed the H.A.A. Newsletter (now in A5 format) *African Herp News*, beginning with No. 13 (August 1990).

J.H.A.A. 38 contained the proceedings of the first Reptile Husbandry Symposium, held at the South African Nature Conservation Centre, Delta Park, Johannesburg, on 23-24 September 1988.

The second H.A.A. Symposium on African Herpetology was held at the National Museum, Bloemfontein, from 8-11 April 1991. It was attended by 56 delegates (including six guest speakers) and featured 42 papers, 13 posters, six slide shows and a computer demonstration. The proceedings were published in J.H.A.A. 40 in August 1992.

The third H.A.A. Symposium on African herpetology was held at the Transvaal Museum, Pretoria, from 11-15 October 1993. It was attended by 54 delegates and 43 papers, 20 posters, four slide shows, three videos and a computer demonstration were presented. A one-day symposium was held during the meeting to commemorate the 50th anniversary of the publication of Vivian FitzSimons' *Lizards of South Africa* (1943), after which the delegates decided to initiate a multi-authored project *The Lizards and Amphisbaenians of Southern Africa* (LASA), with Aaron Bauer and Bill Branch as co-editors. Kraig Adler has agreed to the publication of this book in the prestigious SSAR "Contributions to Herpetology" series. Generic and specific accounts are now being prepared by about 16 contributing authors.

Another development following the Pretoria symposium was the transfer of the responsibility for producing the H.A.A. Journal to the University of Stellenbosch, with Le Fras Mouton as Editor and J.H. van Wyk as Subeditor. The Editor's first move was to transfer the various short notes (Life History Notes, Geographical Distribution, and Venoms and Snakebite), together with "Recent African Herpetological Literature", to *African Herp News*.

The fourth H.A.A. Symposium, with the theme "Biodiversity and Conservation of African Herpetofauna", was held in the Natal Parks Board auditorium at St. Lucia from 22-27 October 1995. Sixty-one delegates attended and 45 papers and several slide shows and posters were presented. At the General Meeting held on the 24th the proposal by Bill Branch (seconded by John Poynton) that the name of the journal be changed to *African Journal of Herpetology* was accepted. The first "new" journal (as Vol. 45, No. 1) appeared in mid-1996.

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INTER- AND INTRA-INDIVIDUAL VARIATION IN THE MEASUREMENT OF A SOUTHERN PADLOPER *HOMOPUS AREOLATUS* SHELL

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INTRODUCTION

Most, if not all, *African Herp News* readers have had the opportunity of measuring a lizard, frog, snake or tortoise; some with less, and others with more sophisticated measuring instruments. Measuring live specimens is usually difficult, as those who have had to measure a writhing *Mabuya capensis* or an angry *Pseudocordylus microlepidotus* can attest to. However, things become easier once the animal is transformed into a museum specimen which no longer writhes or bites the hand measuring it!

The Concise Oxford Dictionary (Allen 1990) defines the verb *measure* as: (to) "*ascertain the extent or quantity of (a thing) by comparison with a fixed unit or with an object of known size*". Therefore, to measure a "*thing*", one has to use an object of known size and lay it across, alongside, or drape it over a "*thing*" to determine its extent or quantity. We humans usually take into our hands a ruler, measuring tape or caliper. The act of taking the measurement, however, depends on the hand that holds the instrument, and because humans differ in more ways than one, the probability of measurements of the same object by two persons being exactly the same is extremely low.

In an attempt therefore, to investigate this phenomenon, it was decided to have different people measure the same object with the same instrument and then analyse the results. The opportunity came with the Fourth Herpetological Association of Africa Symposium in October 1995 at St Lucia, KwaZulu-Natal. Speaking of the meaning of words, the word *symposium*, has an ancient connotation, and according to Allen (1990) means, among other things: "*a drinking-party, esp. of the ancient Greeks with conversation etc. after a banquet*". Now where did I hear that before?

MATERIAL AND METHODS

The shell of an adult female southern padloper tortoise *Homopus areolatus* was used for measuring (in mm) six shell variables, namely: carapace length (CL), carapace width (CW), shell height (SH), width of the third vertebral shield (V3), gular shield midline length (GL) and abdominal shield midline length (AL). To avoid any bias towards a particular method of measuring, the only instruction given was: "*Measure the tortoise shell*". No indication of prior experience in measuring tortoise shells was asked for (which of course would have added another interesting variable to the analysis). A 210 mm steel vernier caliper, which measures to the nearest 0,01 mm, and a data sheet to complete, were supplied with the shell. To investigate between(inter)-individual measurement variation, anybody could measure the shell, complete the data sheet and deposit it anonymously in a box. To determine within(intra)-individual variation in measurement all six variables were also measured by the author (12 repetitions) with a 300 mm digital caliper. For comparative purposes, all six variables were measured once as accurately as possible with the same digital caliper, but with the aid of a stereomicroscope (4X magnification). These were assumed the *correct* measurements.

Data were statistically analysed with Statgraphics Plus for Windows Ver. 1 (Manugistics, Inc. 1994). After outlier rejection (data points more than three interquartile ranges below the lower or above the upper quartiles of a box-and-whisker plot of the individual data series), Shapiro-Wilks tests for normality indicated normal distribution for CL, V3, GL and AL ($p > 0.05$). To avoid meaningless statistics and interpretations on a simple subject (otherwise known as FSF, *i.e.* "*fancy statistical footwork*"), analyses were restricted to summary statistics only.

RESULTS

Measurements from 12 respondents were received and analysed. Two respondents did not measure GL, while three did not measure AL (coded and treated as missing values in the analyses). One respondent noted that GL and AL were not standard terminology. The aim of the exercise, however, was to determine inter- and intra-individual variation in human measuring accuracy and not necessarily to measure standardised variables. Three respondents measured variables to the nearest 0,01 mm, with the rest measured to the nearest 0.1 mm. Variables CL and V3 each had one data point classified as an outlier (rejected), while CL, SH and GL each had one data point classified as a suspect outlier (data values that fall beyond the whiskers of the box-and-whisker plot, but within three interquartile ranges - see Material and Methods). These were not rejected prior to analysis.

Table 1 presents accurate measurements of the six shell variables as measured with a digital caliper under 4X magnification, as well as the measurements and summary statistics for intra-individual variation (one person). Summary statistics for the variables as measured by more than one person (inter-individual variation) are presented in Table 2.

DISCUSSION

In discussing statistical analysis of data, one has to be careful not to read too much into the data and results obtained, as well as be honest with the reader in terms of stating any shortcomings, suspected violation of underlying assumptions, etc. (Maindonald 1992). Interpretation of results usually presents a challenge and meaningful discussion does not always come easily. It is, however, important that statistical deductions are tied to biologically meaningful questions or explanations, and not "*tailored*" to the researcher's preconceived ideas.

In discussing the results I therefore acknowledge that, firstly, more participants could have been asked to measure the shell to increase the sample size; secondly, a series of shells or even other kinds of specimens could have been used in the experiment; and thirdly, I probably did not look long and hard enough for literature on the subject. Since the measurement of a variety of specimens was not possible due to time constraints, the use of one shell and six variables can nevertheless be considered adequate to illustrate the rather straightforward, but important matter of variation in human measurement accuracy.

CL was the only variable that was measured with a high degree of accuracy (0,05 mm difference between sample average and control). One measurement of 111,1 mm CL qualified as an outlier and was rejected. The outlier in V3 could be explained by the fact that the measurer probably did not take into account all the visible so-called growth rings on the shield. The relatively low standard errors of all measurements indicate accurate measuring, and the variability in CW and SH may be explained by the fact that the shell was not always measured at the widest and highest points respectively.

Intra-individual measurement variation was low as indicated by generally low standard deviations and standard errors (Table 1), most likely because the measurer has almost

Table 1 Accurate measurements (Accurate) by digital caliper under 4X magnification, and summary statistics for six variables of an adult female *Homopus areolatus* shell measured by one person (measurements in mm). Carapace length (CL), carapace width (CW), shell height (SH), width of the third vertebral shield (V3), gular shield midline length (GL) and abdominal shield midline length (AL).

Variable	Accurate	N	x	SD	Variance	SE	Range
CL	102.35	12	102.2	0.03	0.001	0.01	102.12-102.19
CW	73.74	12	73,6	0.11	0.012	0.03	73.5-73.8
SH	47.02	12	46.8	0.08	0.007	0.02	46.7-47.0
V3	26.01	12	25.9	0.24	0.058	0.07	25.5-26.3
GL	7.09	12	7.5	0.11	0.013	0.03	7.4-7.6
AL	30.32	12	30.5	0.21	0.046	0.06	30.1-30.8

Table 2 Summary statistics for six variables of an adult female *Homopus areolatus* shell measured by more than one person (measurements in mm).

Variable	N	x	SD	Variance	SE	Range
CL*#	12	102.3	3.03	9.2	0.88	98.8-111.1
CW	12	72.9	0.99	1.0	0.29	71.0-73.9
SH*	12	48.9	0.48	0.2	0.14	46.4-48.1
V3#	12	24.8	2.32	5.4	0.67	17.8-26.7
GL*	10	7.5	0.54	0.3	0.17	6.4-8.4
AL	9	29.8	0.67	0.4	0.22	28.7-30.9

* = One suspect outlier each (not rejected)
\# = One outlier each (rejected)

10 years experience in measuring tortoise shells. CL, CW, SH and GL were measured within very narrow ranges, with V3 and AL showing more variation. V3 was measured most accurately (0,11 mm difference between the control and sample average).

Four conclusions may be drawn from the results. Firstly, variation in human measuring accuracy was clearly demonstrated by the findings of this experiment. Secondly, when an experienced person measures an object (*e.g.* a tortoise shell) once, a high degree of accuracy may be assumed. Therefore, accuracy of means will not necessarily increase with repeated measurements of the same object. (Of course the only way to become experienced in measuring objects is to repeatedly measure objects!) Thirdly, when more than one person measures the same object, low SEs also indicate a high degree of accuracy of the mean, but relatively high SDs of certain variables, which may be used for ageing individual animals or for constructing population size/age structures or age models (for example CL and V3), may have significant bearing on the outcome of an analysis. Finally, if more than one person measures the same object, they must be informed of a) exactly what to measure, b) how to measure it, and c) how to read the measuring instrument accurately.

This study confirmed inconsistent measurement accuracy as a fundamental part of scientific research, and any researcher has to deal with it seriously in order for his/her results to reflect the truth.

ACKNOWLEDGEMENTS

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The two anonymous reviewers are thanked for their comments.

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CITATIONS: THE DESCRIPTION OF *HELEOPHRYNE* BY W.L. SCLATER, AND OTHER CITATIONS

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In *African Herp News* No. 23, on pages 38 to 39, Branch (1995) raises the question of the date of Sclater's publication of *Heleophryne*, and points out deficiencies in citations of this and other publications. Branch's article contains references to seven publications in journals and one book which have relevance to Sclater's article. Of the journal publications one, Poynton 1964, does not appear in Branch's References. Of the remaining six journal references only one (Boycott, 1982) gives full and accurate information. The Zoological Record gives different dates to Branch for Hewitt 1909 and for Methuen & Hewitt 1914, namely 1910 and 1913 respectively, and refers to plates in four publications, while plates are not mentioned by Branch; one of the publications with a plate is Sclater 1898. Anyone who makes use of Inter Library Loans, as any serious student in Africa must, will know the importance of referring to Plates - if they are not requested they may not be supplied. The type of reference given by Zoological Record is helpful, but also may be inadequate for ILL users. Thus there is no reference to the interleaved plates in Methuen & Hewitt, while one is sometimes left in doubt as to whether the description of a plate or plates is on a separate page or not; this may mean a considerable difference in costs, especially for overseas loans where payment is for units of ten copies, whether pages or plates.

When there is need to correct a citation, for instance an incorrect date in such a widely used reference as Frost, there is also need for the correction to reach a wide scientific public. This is not achieved in *African Herp News*. Such a correction, indeed any material which contains references, should be subject to peer review and appear in a peer-reviewed journal. (Incidently, the article by Bates (1995), also in *African Herp News* No. 23, starts with a paragraph which lists a 1971 publication as appearing before 1964; again, this would have been unlikely to have survived peer review).

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Branch, W.R. 1995. Date of description of *Heleophryne* and certain other taxa described by W.L. Sclater. *African Herp News* No. 23: 38-39.

Editor's note: Following a discussion at the General Meeting (24 October 1995) during the St. Lucia symposium (see page 4 of *African Herp News* No. 24) it was agreed that the editor of *African Herp News* would send selected articles (*i.e.* those requiring review) to referees for their opinions. This has been the practice since *African Herp News* No. 24. Reviewed articles are indicated as such in the Acknowledgements.

CITATIONS AND PRIORITY: A REPLY TO VAN DIJK

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I thank the Editor for allowing me to respond to Van Dijk's (1996) letter commenting on certain inadequacies in the citations in my short note "Date of description of *Heleophryne* and certain other taxa described by W.L. Sclater" (Branch, 1995). That I overlooked Poynton (1964) or any reference to the presence of plates in some of the other cited articles, I readily accept and apologize to "any serious student in Africa" wasting money ordering expensive overseas Inter Library Loans on the basis of my incorrectly cited publications.

Van Dijk is wrong, however, with his more important accusations, and I presume my poor use of English has led him to miss the point of my article. By listing various references that give an incorrect date for Sclater's publication I was not chastising the authors for their citation inadequacies. Rather, my aim was to address nomenclatural matters, and to stabilize the original publication date of Sclater's new taxa to avoid any possible conflicts relating to Priority. As I noted, the confusion is due to the sequence in which individual parts of a volume were issued. Libraries may bind volumes by "year", even though a part of the volume was issued in another year. In addition, and leading to further confusion, parts may be distributed after the printed date that they bear. It is the distribution date which is important for determining the Priority of new taxa. Despite Van Dijk's apparent faith in the infallibility of *Zoological Record* (ZR), the year of publication of the description (Hewitt, 1909a) of *Heleophryne regis* is 1909, not 1910, as he states appears in ZR. The description appeared in Vol. 2, No. 1, which is dated November 1909.

It remains possible, for purposes of Priority, that despite this dating, the part was not distributed until 1910. However, FitzSimons (1943) provides insight into this dilemma, as his citation (FitzSimons, 1943, p. 507) of another paper published by Hewitt (1909b) in the same issue of the journal has added the date "Nov. 1909". This appears to be the date of distribution, although confusingly, the issue bears the same printing date. That the presumption that this is the distribution date is correct is supported by FitzSimons' (1943, p. 509) citation of the other paper challenged by Van Dijk, *i.e.* Methuen & Hewitt (1914). This appeared in issue Vol. 4, No. 3 and is dated December 1913. However, FitzSimons (1943, p. 509) dated his citation 1914 and appended the distribution date Jan. 26th, 1914. Both my dates for these papers, challenged by van Dijk on the basis of citations in ZR (*i.e.* 1910 and 1913), were therefore correctly listed as 1909 and 1914, respectively.

For reasons of Priority it should therefore be stressed that the taxonomic novelties described in Methuen & Hewitt (1914), including *Phrynomantis nasuta* (= *P. annectens*), *Narudasia festiva* (new genus and species), *Pachydactylus montanus* (= *P. weberi*), *Zonurus namaquensis* (= *Cordylus namaquensis*) and *Mabuya varia* var. *longiloba* (= *M. variegata variegata*) were all described in 1914, although the original publication bears the date 1913. Returning briefly to the confusion over the date of publication of Sclater's article (1898), I can confirm that Volume 1, Part 1 was printed and distributed in mid-1898 (noted in the 1898 Annual Report of the South African Museum; B. Louw, *pers. comm.*, 27 February 1996), thus confirming 1898 as the correct date of description of the three taxa concerned (Branch, 1995).

On a different matter, with regard to Van Dijk's assertion that my oversights would not have "survived peer review", I retain reservations. Although journal editors insist and usually check that references are presented in the correct format for their journal, my experience with peer review is that referees (as opposed to editors) rarely check the correct title of journals, the page numbers, or the inclusion of plates. One could quote numerous examples, but some from Van Dijk's own papers, which all appeared in peer-reviewed journals, may suffice to illustrate the point: our own journal is cited as the *J. herp. Assoc. S. Afr.* in Van Dijk (1982); and the citation of Hewitt (1937) in Van Dijk (1977) lists neither plates nor the full title of the publication, deficiencies that also occur in his references (Van Dijk, 1971) to both of Loveridge's (1933, 1936) rain forest reports.

Finally, I remain unrepentant about using *African Herp News* as a vehicle for my note. As a herpetologist working in Africa I consider *African Herp News* to be worthy of support and an important outlet for such notes.

ACKNOWLEDGEMENTS

The two anonymous reviewers are thanked for their comments.

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REPORT ON FIRST REPTILE RECORDS FROM THE WESTERN CAPRIVI ZIPFEL, NAMIBIA

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The Caprivi Zipfel, that peculiar extension or appendage in the north-eastern corner of Namibia, is a geographical oddity and reminder of colonial times. It was created as a concession by the British Crown to allow the then German Empire access to the Zambezi River, as part of the involved so-called 'Heligoland-Zanzibar Exchange'. This agreement was signed on 1 July 1890 and in time this appendix was named after the then German Chancellor, Count Leo von Caprivi. Although already provisionally surveyed by 1904 (Seiner, 1919) its borders remained in contention for many years to come . The area proved to be so inaccessible from the west that German authority was established only in 1908 (Bruchmann, 1996) in response to British complaints about lawlessness in the area. For the next couple of decades routine access to the Eastern Caprivi Strip was only possible via the Bechuanaland Protectorate (Botswana) or Northern Rhodesia (Zambia), which left the Western Caprivi undisturbed and unexplored.

Ecologically this region extends Namibia's diverse spectrum of habitats into higher rainfall areas of tropical savannahs. Several large rivers with associated flora and fauna transect this region. The Kwando River physically divides the strip into two parts. This paper deals only with that part lying between the Okavango and Kwando rivers, as apparently no published reptile records from there exist. In contrast to this, a number of species have been recorded from the Eastern Caprivi (*e.g.* Broadley, Gans & Visser, 1976; Broadley, 1983).

In 1970 the Transvaal Museum, as well as botanists and an entomologist of the Department of Agricultural and Technical Services, undertook a multi-disciplinary natural history collecting trip to the Eastern Caprivi. No permission to collect in the Western Caprivi was given, although a camp on the west bank of the Kwando River, administratively part of Eastern Caprivi, produced some specimens. Snake and amphibian records from the Eastern Caprivi collected during that trip, as well as other specimens from there submitted to the Transvaal Museum over the years, have mostly been reported on (Broadley, 1990; Poynton & Broadley, 1991; Channing & Griffin, 1993).

During April 1995 the author visited the Caprivi Strip again with a group of interested people. Permission was obtained from the Namibian authorities to do herpetological collecting, especially in the Western Caprivi. Only small numbers of specimens were found during the three days while in transit. It was considered worthwhile to report on the material, deposited in the Namibian National Museum (SMR) in Windhoek. The Transvaal Museum (TM) material, collected on the west bank of the Kwando River in 1979, is also listed below.

Apart from the two large rivers with their riverbanks and floodplains on either side, Western Caprivi consists of relatively flat terrain with parallel fossil dunes of grey Kalahari sand and a tendency for pan formation in the dune valleys ("shonas"). The vegetation, especially along the dune crests, is mainly dry woodland. This terrain continues to the south into the Okavango Delta of Ngamiland in Botswana and to the north it merges into the woodland savannah of south-eastern Angola. Both these

neighbouring areas are also herpetologically practically unsampled (Monard, 1937; Laurent, 1964; Auerbach, 1987; Broadley, 1990; Ruas, 1996). The small collection from southern Angola reported on by Branch & McCartney (1992) is presently the most significant herpetological publication dealing with this area. Any previous records are based on only a few casually collected specimens (Angel, 1923; Monard, 1936; Auerbach, 1987; Broadley, 1990; Poynton, 1964).

SPECIES ACCOUNTS

Order: SQUAMATA
Suborder: SAURIA
Family: GEKKONIDAE

Lygodactylus chobiensis FitzSimons, 1932 — Chobe Day Gecko

SMR 8292-94, Susuwe Nature Conservation Camp	(17°45'E 23°21'S)	15.04.95
SMR 8306-68, Susuwe Nature Conservation Camp	(17°45'E 23°21'S)	16.04.95

These small geckos were particularly noticeable and appeared to be concentrated on man-made structures, such as houses and sheds, at the Nature Conservation Camp at Susuwe. As they are very well camouflaged they probably get overlooked, as none were seen elsewhere.

Family: SCINCIDAE

Mabuya striata wahlbergii (Peters, 1869) — Wahlberg's Striped Skink

TM 39143, 10 km S of Kongola Bridge	(17°46'S 23°19'E)	27.09.70
TM 39163, 10 km S of Kongola Bridge	(17°46'S 23°19'E)	08.09.70
TM 39168, 10 km S of Kongola Bridge	(17°46'S 23°19'E)	29.09.70
TM 39174, 10 km S of Kongola Bridge	(17°46'S 23°19'E)	01.10.70
TM 39175, 10 km S of Kongola Bridge	(17°46'S 23°19'E)	02.10.70
SMR 8305, Susuwe Nature Conservation Camp	(17°45'S 23°21'E)	15.04.95
SMR 8313, 3 km N of Susuwe on bushtrack	(17°44'S 23°20'E)	15.04.95

Mainly arboreal, associated with standing trees or fallen timber.

Mabuya varia (Peters, 1867) — Variable Skink

TM 39164-67, 39169-70, 39176, 10 km S of Kongola Bridge	(17°46'S 23°19'E)	28.09-02.10.70
SMR 8295, Susuwe Nature Conservation Camp	(17°45'S 23°21'E)	14.04.96
SMR 8309, 3 km N of Susuwe Camp on bushtrack	(17°46'S 23°20'E)	15.04.96
SMR 8321-12, 6 km NNW of Beacon 984 on old main rd	(17°48'S 22°59'E)	16.04.96

Terrestrial, often associated with logs, dead brushwood or bushes.

Mabuya variegata punctulata (Bocage,1872) — Variegated Skink

SMR 8311, 8315, Susuwe Nature Conservation Camp	(17°45'S 23°21'E)	15.04.96

Terrestrial in grassveld with shrubs.

Lygosoma sundevallii (Smith, 1849) — Sundewall's Writhing Skink

SMR 8297, 8300, 11 km N of Susuwe	(17°41'S 23°22'E)	15.04.95
SMR 8310, 8312, 3 km N of Susuwe on bushtrack	(17°44'S 23°20'E)	15.04.95

Encountered only in sand under logs, by day.

Typhlacontias rohani Angel, 1923 — Rohan's Burrowing Skink

TM 39162, 10 km S of Kongola bridge	(17°46'S 23°19'E)	28.09.70
SMR 8303-34, 11 km N of Susuwe	(17°41'S 23°22'E)	15.04.95
SMR 8314, 3 km N of Susuwe on bushtrack	(17°44'S 23°20'E)	15.04.95
SMR 8316-67, 7 km NW of Susuwe on bushtrack	(17°45'S 23°17'E)	15.04.95
SMR 8320, 8 km W of Susuwe on bushtrack	(17°46'S 23°17'E)	15.04.95
SMR 8330, nr Geusha on old main road	(17°50'S 22°47'E)	16.04.95
SMR 8331-34, 6 km from Golden Highway on old main road	(18°00'S 22°15'E)	16.04.95
SMR 8338, 33 km E of Bagani on Golden Highway	(18°03'S 21°51'E)	17.04.95

Under logs on slightly moist sand, by day.

Family: CHAMAELEONIDAE

Chamaeleo dilepis dilepis Leach, 1819 — Flap-necked Chameleon

SMR 8326, 12 km E of Geusha old main road	(17°50'S 22°54'E)	16.04.95

The small size of the occipital flaps would qualify this specimen to be considered of the *quilensis* form. Found crossing road in open woodland.

Family: AGAMIDAE

Agama aculeata distanti Boulenger, 1902 — Distant's Ground Agama

SMR 8327, near Geusha on old main road	(17°50S' 22°47'E)	16.04.95

Terrestrial, in open woodland. Subadult specimen (SVL = 50 mm).

Family: LACERTIDAE

Heliobolus lugubris (Smith, 1838) — Bushveld Lizard

TM 39172, 10 km S of Kongola Bridge	(17°53'S 23°18'E)	30.09.70

Ichnotropis capensis (Smith, 1838) — Cape Rough-scaled Lizard

TM 39171, 10 km S of Kongola Bridge	(17°51'S 23°19'E)	27.09.70
SMR 8319, 7 km NW of Susuwe camp on bushtrack	(17°45'S 23°17'E)	15.04.95
SMR 8323, 6 km WNW of Beacon 984 old main road	(17°48'S 22°59'E)	16.04.95
SMR 8324, 12 km E of Geusha old main road	(17°50'S 22°54'E)	16.04.95

The specimens collected during April 1995 were juveniles with SVL length less than 50 mm, while the specimen collected during September was a subadult, substantiating Broadley's (1967) observations about the reproductive and growth pattern of this species. Active during the day in tall, open grassveld.

Ichnotropis squamulosa (Peters, 1854) — Common Rough-scaled Lizard

SMR 8298, 11km N of Susuwe camp	(17°41'S 23°22'E)	15.04.95
SMR 8328, nr Geusha on old main road	(17°50'S 22°47'E)	16.04.95
SMR 8336-7, 33km E of Bagani on Golden Highway	(18°03'S 21°51'E)	17.04.95

All were adults, no juveniles seen. The difference in generations and size classes between this species and *I. capensis* substantiates Broadley's (1967) observations about staggered populations which reduce competition. Active during the day in tall, open grassveld.

Suborder: AMPHISBAENIA
Family: AMPHISBAENIDAE

Zygaspis quadrifrons (Peters, 1862) — Kalahari Round-headed Worm Lizard

SMR 8296, 11 km N of Susuwe	(17°41'S 23°22'E)	15.04.95
SMR 8302, 11 km N of Susuwe	(17°41'S 23°22'E)	16.04.95
SMR 8335, 6 km N of Golden Highway old main road	(18 03'S 21 51'E)	17.04.95

Found under decaying logs on sand.

Suborder: SERPENTES
Family: LEPTOTYPHLOPIDAE

Leptotyphlops scutifrons scutifrons (Peters, 1854)		Peter's Worm Snake
SMR 8301, 11 km N of Susuwe camp	(17°41'S 23°22'E)	15.04.95
SMR 8325, 12 km E of Geusha old main road	(17°50'S 22°54'E)	16.05.95
SMR 8329, near Geusha old main road	(17°50'S 22°47'E)	16.05.95

Found under decaying logs on sand; also under a brick north of Susuwe.

Order: CHELONII
Suborder: CRYPTODIRA
Family: TESTUDINIDAE

Geochelone pardalis (Bell, 1828)		Leopard Tortoise
TM 39173, 39414, 15km S of Kongola Bridge	(17°53'S 23°18'E)	01.10.70
TM 39413, 10km S of Kongola Bridge	(17°51'S 23°19'E)	28.09.70
SMR 8299, 11km N of Susuwe camp	(17°41'S 23°22'E)	15.04.95

Only dry shells were collected in 1970, while the 1995 specimen was a live juvenile with a shell length of 67 mm.

Kinixys spekii (Gray, 1863)		Spek's Hinge-backed Tortoise
TM 39413, 10km S of Kongola Bridge	(17°51'S 23°19'E)	30.09.70

Dry adult shell found in open woodland adjacent to floodplain.

DISCUSSION

Surprisingly little reptile activity was observed during the two visits to the western Caprivi. This may have been due to the fact that both were made outside the rainy season. Apart from a few *Leptotyphlops* specimens uncovered while turning over logs, no snakes were seen and of about six species of amphisbaenians known from the general area, only one was encountered. The species documented above are typical of the biome in which the area falls, *i.e.* tropical savannah on deep sand. Although no new records for the general area were recorded, some distribution gaps were reduced. A special effort was made to collect additional material of the rare *Ichnotropis grandiceps* known from the general area, but without success.

ACKNOWLEDGEMENTS

Permission to collect was granted by the South West African Department of Nature Conservation (1979) and the Ministry of the Environment and Tourism, Namibia (1995). Both departments are gratefully acknowledged. Eyrin Griffin of the State Museum kindly provided catalogue numbers for the more recent part of this collection. I am indebted to my travel companions N. Jacobsen, H. Kubierske, M. Barts and D. Varga for their enthusiastic efforts and contributions. Stephanie Ritter typed the initial manuscript.

The two anonymous reviewers are thanked for their comments.

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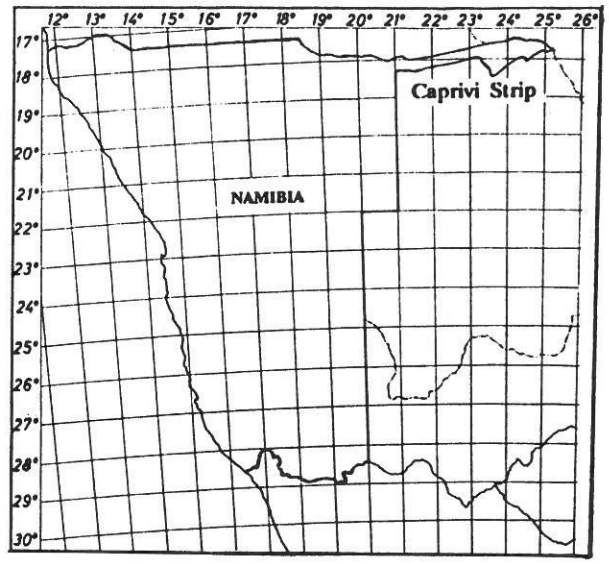

CORRECTION OF THE TYPE LOCALITY OF *PHYLLODACTYLUS PERINGUEYI*

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In the original description of *Phyllodactylus peringueyi*, Boulenger (1910) provided the following details regarding the origins of the two syntypes: "A male from Little Namaqualand (coll. Peringuey) and female from Port Elizabeth (coll. Moorhouse)." No specific type locality, distinguishing between the distant localities of the two syntypes, was designated. No further specimens were collected during the next 82 years, and for much of this time the species remained an enigma. In 1992 it was re-discovered and found to be relatively common along the banks of the lower Kromme River, Eastern Cape (Branch, Haagner, Hall & Craig, 1992). Searches at the time for additional specimens in adjacent estuaries were unsuccessful.

Branch & Bauer (1992, 1994) presented a re-description of the species and a summary of its taxonomic history. Although they designated the Namaqualand syntype (due, in part, to its better condition) as the lectotype, they noted that no modern collections from Namaqualand existed, and due to poor curatorial practices at the South African Museum (SAM) at the time that the original specimens were accessioned, serious doubt existed as to the claimed Namaqualand locality. There was no reason to doubt the Port Elizabeth record, for which original correspondence still existed. However, no additional specimens of *P. peringueyi* from the vicinity of Port Elizabeth were available, and for these reasons, Branch & Bauer (1994) cautioned acceptance of the published localities of both syntypes and did not restrict the type locality for the species. Unintentionally, however, their action in designating the Namaqualand specimen as the lectotype may, by default, have designated this as the type locality.

Recent collections of *P. peringueyi* from the Port Elizabeth region require the problem to be re-considered. Although Boulenger's (1910) description notes "a female from Port Elizabeth (coll. Moorhouse)", the SAM catalogue records the exact locality as Chelsea Point, near Port Elizabeth. Chelsea Point is located on the western boundary of Cape Recife, directly south of Port Elizabeth. It comprises coastal rocks backed by shifting coastal dunes, with scattered low sandstone outcrops and areas of calcrete pavement. It is naturally vegetated with a thick, dwarf heathland, but is now heavily infested with introduced alien Australian *Acacia*.

New material (listed below) documents the presence of *P. peringueyi* from Chelsea Point and its immediate vicinity, and confirms the Chelsea Point locality from which the designated paralectotype was collected on 2 December 1904 by Mr A. Moorhouse.

i) Chelsea Point, Port Elizabeth district (34°03'S, 25°38'E; 3425BA), 17 July 1995, D. Riley; Port Elizabeth Museum, PEM R12206 - subadult male (21,7 mm SVL + 21,7 mm tail length).

ii) Willows, Port Elizabeth district (34°03'S, 25°37'E; 3425BA), 17 July 1995, D. Riley; two specimens, PEM R12207 - adult female (28,4 + 25,9 mm); PEM R12208 - adult male (26,8 + 27,6 mm). This locality is approximately 3 km west of Chelsea Point.

iii) Schoenmakerskop, Port Elizabeth district (34°03'S, 25°38'E; 3425BA), 5 November 1995, D. Riley; PEM R12209 - adult male (24,4 + 21,3 mm). This locality is approximately 8,5 km west of Chelsea Point.

The Willows and Chelsea Point specimens were collected in coastal vegetation among rocks above the high-water mark. The Schoenmakerskop specimen was one of several found in a suburban garden, approximately 100 m from the sea in this coastal village. All specimens are boldly striped and conform in colouration, dorsal patterning and scutellation with the types and Kromme material (Branch & Bauer, 1994). It is evident that selection of the Namaqualand syntype as the lectotype for the species causes confusion as to the type locality of the species. This is clearly undesirable. Branch & Bauer (1994) documented the reasons for choosing the Namaqualand syntype as the lectotype for the species, even though its cited locality was almost certainly incorrect. To avoid possible confusion resulting from further changes in the status of type material, I recommend that the "Namaqualand" lectotype retain its status, but that the original type locality be recorded as "in error". I also take this opportunity to correct the type locality of *Phyllodactylus peringueyi* to Chelsea Point, Port Elizabeth district (34°03'S, 25°38'E; 3425BA). The species appears to be restricted to coastal regions of the Eastern Cape between Port Elizabeth and the Kromme Estuary.

ACKNOWLEDGEMENTS

I thank Daryl Riley and family for bringing the specimens to my attention.

The two anonymous reviewers are thanked for their comments.

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POSTSCRIPT TO: THE VISITOR: A CASE FOR THE FBI'S "X" FILE TEAM?

Rob Yeadon

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I have been asked if I could provide some information about the L. Bevis mentioned in the above article which appeared in *African Herp News* No. 24 in December 1995. The information was found in the book *Collections & Recollections* compiled by C.D. Quickelberge and published by the Durban Natural History Museum to celebrate it's centenary 1887-1987. It is a history of the museum and a must-be-read book for all persons involved with the running of museums, as it describes the trials and tribulations which a handful of dedicated people have had to endure to make the Durban Museum a reality.

A.L. (Lionel) Bevis was born on 5 August 1897 and joined the Durban Museum as an assistant on 21 March 1911 while only 13 years old! He became Assistant Director in 1952 and retired in 1961, after having worked at the museum for 50 years, the longest serving museum staff member. Bevis died in 1984 at the age of 87 years. He was a dedicated museum man and spent his annual vacations collecting specimens, mostly insects, for the museum's collections. Bevis collected in Basutoland (now Lesotho) on horseback from December 1938 to March 1939, and also in 1955/56. It was on his second visit that he collected the frog which initiated my article in the previous *African Herp News*.

I titled the article *The Visitor* in reference to the spirit of L. Bevis as being the "visitor" to the museum. In fact, I am the visitor. After having worked there for 50 years, Bevis's spirit must be in the very walls and floor of the museum. Being the dedicated museum man that he was, even when he went home his spirit probably remained at the museum. It has never left! I first titled my article *Spiritual Help*, which I now know would have been more appropriate.

I said in my article that I eventually had no more locality "coincidences", but how about this one? Two weeks ago, as I write, some butterflies from Ncandu Forest Reserve near Newcastle were sent to the museum for identification. As we are currently putting together a *Natal Butterfly Atlas* I had to add this locality to my list of "lats" and "longs" to find. By coincidence (I am getting used to them by now) I had Ncandu Falls on my list of eight localities to find. Thanks to the spirit of L. Bevis I soon found the first five on museum maps. The sixth was Ncandu Falls which is on the Newcastle 1 : 50 000 map. As I began to scan the map following the Ncandu River up through Newcastle to look for the falls, my eyes caught the name Lennoxton, which is a suburb of Newcastle, and situated beside the Ncandu River. As my eyes hovered on this name it was announced on the radio that the Ncandu River at Newcastle had burst its banks from all the up-country rain, and that the residents of Lennoxton were being evacuated. Try to work out the odds of this sort of "coincidence" happening!

After visiting several libraries I eventually found a gazetteer which listed a Lehaha-la-Molapo, which turned out to be, in the *Reader's Digest Atlas of South Africa*, a dot at the confluence of two streams some 50 miles east and slightly north of Maseru. One of the two streams is part of the Bokong River and the other must be the Molepi Stream which we have been trying to find for the past year. A 1 : 50 000 map of the area should provide more information. L. Bevis must have had a sense of humour and enjoyed having me running around in circles - just have a look at the second and third syllables of the above name! Pity he hadn't fitted his horse with a more accurate odometer. He said that the stream was 40 miles east of Maseru!

LIFE HISTORY NOTES

African Herp News publishes brief notes concerning the biology of the herpetofauna of the African continent and adjacent regions, including the Arabian peninsula, Madagascar, and other islands in the Indian Ocean.

A standard format is to be used, as follows: **SCIENTIFIC NAME; Common name** (using Bill Branch's *Field Guide to the Snakes and other Reptiles of Southern Africa*, 1988, for reptiles; and Passmore & Carruthers' *South African Frogs*, 1995, for amphibians, as far as possible); **Keyword** (this should be one or two words best describing the topic of the note, *i.e.* Reproduction, Avian predation *etc.*); the **text** (in brief English with only essential references quoted and in abbreviated form); **Locality** (country, province or state, location, latitude and longitude if available and quarter-degree grid unit; elevation above sea level; use metric distances); **Date** (day, month, year); **Collector(s); Place of deposition and museum accession number** (required if specimens are preserved); Submitted by: **NAME**, address in parentheses.

New South African province names must be used.

Notes submitted in an incorrect format/style will be returned to the authors.

SAURIA

GEKKONIDAE

PHYLLODACTYLUS PERINGUEYI
Péringuey's Leaf-toed Gecko
REPRODUCTION

On 15 February 1992, during a survey of *Phyllodactylus peringueyi* on the Kromme River, two freshly laid eggs were found under a log in *Sarcocornia perennis* floodplains near the bridge between Humansdorp and Cape St Francis (33°08'10"S, 24°48'01'E; 3324BB). The eggs were retained and artificially incubated. They measured length - mean 11,95 mm, SD 0,05 mm, range 11,9 - 12,0 mm; width 5,0 mm, no range. Both eggs hatched on 29 March 1992 after 44 days. Hatchlings measured: snout-vent length - mean 14,71 mm, SD 0,13 mm, range 14,6 - 14,8 mm, total length - mean 24,1 mm, SD 0,3 mm, range 23,8 - 24,4 mm. One hatchling was deposited in the herpetological collection of the Port Elizabeth Museum (PEM R11334).

On 7 January 1995, following a major flood of the Kromme River during the summer of 1994, a brief search for *P. peringueyi* was carried out east of the bridge at the Kromme River mouth, Humansdorp district (34°08'15"S, 24°48'50"E; 3424BB; 1 m a.s.l.). Although no specimens were found, a nest site was located under an empty 200 liter drum. The eggs, five groups of two adhered clutches, were deposited together in a dense clump of grass on moist soil. There were eight newly-hatched eggs and two unhatched eggs which were carefully removed and artificially incubated. Eggs measured: length - mean 7,34 mm, SD 0,25 mm, range 7,16 -

7,52 mm; width - 5,69 mm, SD 0,03 mm, range 5,66 - 5,71 mm, mass 0,09 g, no range. Judging from their dark colouration, they were well developed, and hatched on 11 January 1995. Hatchlings measured: SVL - mean 14,32 mm, SD 0,16 mm, range 14,2 - 14,43 mm; total length - mean 23,1 mm, SD 0,14 mm, range 23,01 - 23,22 mm, mass 0,07 g, no range. They were deposited in the herpetological collection of the Port Elizabeth Museum (PEM R10875-76).

Nothing is known on the reproduction of the species as it was only recently re-discovered after an absence of nearly a century (Branch & Bauer, 1994, *Ann. S. Afr. Mus.* **102(2):** 13-30). The species appears to follow the typical *Phyllodactylus* reproductive pattern, laying several clutches of two hard-shelled eggs during summer (Branch, 1988, *Field Guide to the Snakes and other Reptiles of Southern Africa*, Struik, Cape Town).

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AFROEDURA PONDOLIA MARLEYI
Pondo Flat Gecko
REPRODUCTION

On 30 October 1995 an adult gravid (31,2 + 31,7 = 62,9 mm) female *Afroedura pondolia marleyi* was collected in association with *Pachydactylus vansoni* and *P. maculatus* under a dead *Aloe marlothii* stem on the foothills of the Lebombo Mountain, west of Ndumu Game Reserve, Ngwavuma district, KwaZulu-Natal (26°57'18"S, 32°08'32"E; 2632CC; 135 m a.s.l.). She was retained and laid two eggs on 3 November 1995. These measured 7,8 x 6,1 and 7,7 x 6,2 mm. They were incubated on moist paper towelling and in early January 1996 the hatchlings were discovered. The exact date of hatching is unknown. Hatchlings measured: 17,2 + 15,3 = 32,5 mm and 16,8 + 15,3 = 32,1 mm, and weighed 0,09 and 0,10 g respectively. The female and hatchlings were deposited in the herpetological collection of the Port Elizabeth Museum (PEM R12016-17, 12019). Little is known on reproduction in the genus *Afroedura*. According to Branch (1988, *Field Guide to the Snakes and other Reptiles of Southern Africa*, Struik, Cape Town) female *A. p. pondolia* lay two eggs (8 x 9 mm) which hatch after 105-114 days; hatchlings measure about 45 mm in total length.

Acknowledgements: Vincent Egan and Mervyn Mason for pleasant field assistance.

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SCINCIDAE

SCELOTES ANGUINA
Algoa Dwarf Burrowing Skink
SIZE

On 18 October 1995 an adult *Scelotes anguina* was collected by M.C. Mason on the Farm Grassyridge, Port Elizabeth district (33°39'26"S, 25°37'12"E; 3325DA). It was found amongst the roots of a *Maytenus* bush in grassveld on limestone. The specimen was deposited in the herpetological collection of the Port Elizabeth Museum (PEM R11971) and had a total length of 156,7 (81,3 + 75,4) mm, mass 2,4 g. The largest specimen recorded by FitzSimons (1943, *Mem. Transvaal Mus.* **1:** 1-528) measured 136 (71 + 65) mm, while Branch (1988, *Field Guide to the Snakes and other Reptiles of Southern Africa*, Struik, Cape Town) mentions that it may attain a maximum length of 16 cm. The Grassyridge specimen exceeds the previous record size by 20,7 mm.

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MABUYA HOESCHI
Hoesch's Skink
SIZE

Only a few published size records exist for the skink *Mabuya hoeschi*. On 7 May 1966 an adult female (dissected) was collected 10 km north-east of Sanitatus (18°11'S, 12°46'E; 1812Bb3), Opuwo district, Namibia, by W.D. Haacke, and deposited in the collection of the Transvaal Museum (TM 32364). The following measurements were taken after preservation: head height (HH, at occiput), head length (HL, tip of snout to anterior edge of tympanum) and head width (HW, widest part of skull) were measured with digital calipers; snout-vent length (SVL) and tail length were measured with a plastic millimeter ruler. Measurements: HH = 12,3 mm, HL = 18,7 mm, HW = 17,8 mm, SVL = 100 mm, tail length = 155 (complete) mm. In Mertens' (1955, *Abh. Senckenb. Naturf. Ges.* **490:** 1-172) treatment of the Namibian herpetofauna the largest recorded specimen was the holotype (SMF 45681), a male with 62 mm SVL and 130 mm tail length. Branch (1988, *Field Guide to the Snakes and Other Reptiles of Southern Africa*, Struik, Cape Town) gives the total length range as 17-19 cm, with a maximum of 20 cm. In size, the Sanitatus specimen exceeds previously published records.

Submitted by: **M.J. WHITING & W.D. HAACKE** (Department of Herpetology, Transvaal Museum, P.O. Box 413, Pretoria 0001, South Africa).

LACERTIDAE

HELIOBOLUS LUGUBRIS
Bushveld Lizard
COPULATION

Lizard reproductive biologists frequently rely on preserved specimens to elucidate timing of reproduction and reproductive cycles. Consequently, any reproductive behavioural components are absent from these studies. In the late afternoon of 20 February 1996 I observed a female *Heliobolus lugubris* on the farm Bergvallei 753 (1914DA), Outjo district, Namibia. She was approached by a male who chased her for a few meters before seizing her at the tail base. The male subsequently shifted his grip to behind her left forelimb. Copulation was observed for a duration of about 30 min, during which time the female showed no signs of resistance.

Acknowledgements: I thank Bill Cooper for companionship in the field. Our field work was sponsored by Indiana University-Purdue University Fort Wayne, and the Transvaal Museum. Jan and Ans Steyn graciously provided us with accommodation and allowed us to conduct field work on their farm.

Submitted by: **M.J. WHITING** (Department of Herpetology, Transvaal Museum, P.O. Box 413, Pretoria 0001, South Africa).

SERPENTES

LEPTOTYPHLOPIDAE

LEPTOTYPHLOPS CONJUCTUS INCOGNITUS
Incognito Worm Snake
REPRODUCTION

On 31 October 1995 an adult female (123 + 16 mm; 0,4 g) *Leptotyphlops conjunctus incognitus* was found in a trench at Sihangwe (27°03'S, 32°25'E; 2732AB), Tembe Elephant Park, Ngwavuma district, KwaZulu-Natal. She laid three eggs on 5 December 1995. These measured: length - mean 10,8 mm, SD 3,24 mm, range 9,2 - 11,8 mm; width - mean 3,13 mm, SD 1,16 mm, range 2,8 - 3,4 mm; mass 0,13 g (weighed *en massae*). The eggs weighed a total of 0,3 g, *i.e.* 75% female post-partum mass. Unfortunately the eggs dehydrated. They were deposited, together with the female, in the herpetological collection of the Port Elizabeth Museum (PEM R12015). Little is known on reproduction in the genus. Broadley (1983, *FitzSimons' Snakes of Southern Africa*, Delta Books, Johannesburg) reported that the eggs are small, elongate and not unlike grains of rice.

Acknowledgements: To the Kyle family for their kind hospitality.

Submitted by: **W.R. BRANCH & G.V. HAAGNER** (Department of Herpetology, Port Elizabeth Museum, P.O. Box 13147, Humewood 6013, South Africa)

COLUBRIDAE

LAMPROPHIS FUSCUS
Yellow-bellied House Snake
SIZE, LEPIDOSIS AND DISTRIBUTION

In December 1995 a dead-on-road *Lamprophis fuscus* was collected in rocky, montane grassland (1520 m a.s.l.) approximately 1,5 km south of the entrance to Malolotja Nature Reserve (2631AA) in north-western Swaziland. The specimen is an adult female of exceptional size - 635 + 125 = 760 mm. It was deposited in the collection of the Transvaal Museum (TM 79855) and represents the first record of the species from Swaziland.

The previously recorded maximum size for the species is 460 + 100 = 560 mm for the male type from the Western Cape listed by Boulenger (1893, *Catalogue of the Snakes in the British Museum (Natural History)*) and referred to by Broadley (1983, *FitzSimons' Snakes of Southern Africa*, Delta Books, Johannesburg). The Swaziland specimen exceeds the previously recorded maximum size by 200 mm. This new record size removes the species from the "small" snake category referred to by Broadley (1983) and other authors.

The Malolotja specimen has a higher than normal ventral scale count of 202, and a lower than normal subcaudal scale count of 51. Broadley (1983) gives these counts as 165-199 and 56-74 respectively. The Swaziland specimen has similar scale counts to a female from nearby Lothair in south-eastern Mpumalanga province, which had 201 ventrals and 51 subcaudals (Jacobsen, 1989, *A herpetological survey of the Transvaal*, Ph.D. thesis, University of Natal, Durban).

The distribution record from near Malolotja Nature Reserve (2631AA) represents a range extension of 50 km to the north-east of Lothair (2630AD) (Broadley, 1983), while Jacobsen's (1989) record for Doornhoek (2430DC), 15 km north-west of Pilgrims Rest, represents a further range extension of 120 km north of Lothair.

Two of the specimens (both females) from the three northern-most localities have atypical ventral and subcaudal scale counts. The high ventral scale count and low subcaudal scale count could represent sexual differences as is the case in other species in the genus. Alternatively, these differences could perhaps indicate a geographical cline within the range of the species. Further specimens from the north of the species' range should be closely examined to see if there is a consistent difference in these scale counts and whether or not these differences occur in both sexes.

Submitted by: **R.C. BOYCOTT** (Malolotja Nature Reserve, P.O. Box 1797, Mbabane, Swaziland).

DUBERRIA LUTRIX LUTRIX
Southern Slug-eater
LEUCISTIC COLOUR PHASE

On 9 April 1994 an adult leucistic male *Duberria lutrix lutrix* (306 + 87 = 393 mm) was found at Dorchester Heights, East London (32°58'S, 27°57'E; 3227DD) by A. Bunford. It was brought to the Port Elizabeth Museum where it was photographed, the hemipenes everted and the specimen (PEM R9026) finally deposited in the wet collection. Scutellation: ventrals 130, subcaudals 48, upper labials 6 (3rd and 4th entering orbit), lower labials 6 (first four in contact with anterior chin shield), anal plate entire. It had an overall ash-white colour with a small black anterior tip to each dorsal scale. There is a dark patch on both sides of each ventral scale, forming a line down both sides of the belly, which is white. The eyes were black. There exist numerous terms for describing the various colour morphs in snakes, especially captive-bred varieties for the pet trade. This white colour phase is distinguished from albinism in that the eyes are black (not pink) and colour pigment is not entirely lacking elsewhere. Albanism, or any other unusual colour variations, have not previously been reported in this species.

Acknowledgements: Andrew Bunford is thanked for donating the specimen to the Port Elizabeth Museum.

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PSEUDASPIS CANA
Molesnake
JUVENILE COLOURATION

On 29 July 1991 an adult (1243 + 252 = 1495 mm) male *Pseudaspis cana* was collected at the Sea View Game Farm (33°51'S, 25°25'E; 3325CD), Port Elizabeth district, Eastern Cape, and brought to the Port Elizabeth Snake Park where it was kept alive. During the next winter it died of unknown causes and was deposited in the herpetological collection of the Port Elizabeth Museum (PEM R8262). It had 189 ventrals and 60 subcaudals; the everted hemipenes extended to the 28th subcaudal, and measured 134 mm, 53,1% of tail length. What was unusual about this male was that it had retained full juvenile colouration, despite its maturity. The dorsum was rusty brown with 91 black spots extending to the tail, olive-brown laterally, ventrum black. There were two parallel combat scars 9 mm apart, 58 mm anterior to the vent. Similar scars have been observed in other adult males (pers. obs.). The testes appeared flaccid and measured only 76 x 11 mm.

On 10 December 1992 another adult (1226 + 272 = 1498 mm) male was found dead on the road at the same locality as above. It was deposited in the herpetological collection of the Port Elizabeth Museum (PEM R7982). This male had 186 ventrals, 62 subcaudals, and also retained the juvenile colour pattern, although the background colour was a grey-brown. It had four parallel combat scars at midbody.

The above-mentioned specimens are not the first to be noticed with juvenile colour pattern (pers. obs.). Broadley (1983, *FitzSimons' Snakes of Southern Africa*, Delta Books, Johannesburg) mentioned that adults occasionally retain some juvenile spots. However, this is the first time that the typical juvenile colour pattern of rusty brown dorsum and black spots has been recorded for a fully mature snake.

Submitted by: **G.V. HAAGNER & W.R. BRANCH** (Department of Herpetology, Port Elizabeth Museum, P.O. Box 13147, Humewood 6013, South Africa).

PSAMMOPHIS LEIGHTONI TRINASALIS X P. L. NAMIBENSIS
Namib Sand Snake
INTERGRADE

On 27 October 1990 a subadult (287 + 97 = 384 mm; 7,6 g) *Psammophis leightoni* was caught whilst actively foraging in the Namib dunes on farm Wolwefontein, 102 km south of Sesriem, Namibia (25°07'S, 15°59'E; 2515BB). It was preserved and accessioned into the herpetological collection of the Port Elizabeth Museum (PEM R6405). On closer examination it appeared to be an intergrade between *P. l. trinasalis* and *P. l. namibensis*. Scuttelation: ventrals 179, subcaudals 91, upper labials 8 (4th and 5th entering orbit); lower labials 10 (first 4 in contact with anterior chin shields); anal plate divided. The colour is a grey-brown above, with a series of pale spots on the dorsal scales, and a narrow lateral stripe. They were two faint spots on the parietals and three black spots on the first three lower labials on each side of the head. The overall colour pattern of *P. l. trinasalis* is dominant. According to Broadley (1983, *FitzSimons' Snakes of Southern Africa*, Delta Books, Johannesburg), *P. l. trinasalis* has 150-172 ventrals and 84-120 subcaudals, while *P. l. namibensis* has 167-187 ventrals and 94-112 subcaudals. The higher ventral count of the Wolwefontein snake indicates *P. l. namibensis*, but the subcaudal count and overall colour points to *P. l. trinasalis*. The specimen therefore appears to be an intergrade between the two subspecies. The taxonomy of *Psammophis* is problematic and requires further investigation.

Acknowledgements: Dr W.R. Branch commented on the text. The Namibian Ministry of Environment and Tourism supplied the necessary collecting permits, and in this regard, Mike Griffin is thanked for his assistance.

Submitted by: **G.V. HAAGNER** (Department of Herpetology, Port Elizabeth Museum, P.O. Box 13147, Humewood 6013, South Africa).

ELAPIDAE

NAJA NIVEA
Cape Cobra
OPHIOPHAGY

On 16 January 1980 an adult *Naja nivea* was caught in marginal vegetation behind The Lakes Nature Conservation Station, Rondervlei (3325DC), George district, by N.G. Palmer. Soon after capture it regurgitated an adult female *Bitis a. arietans*. The cobra measured 1253 (1035 + 218) mm and weighed 427,8 g, while the Puffadder measured 609 (562 + 47) mm and weighed 264,4 g. The Puffadder was apparently freshly ingested as it did not exhibit signs of digestion. The prey comprised 48,6% of the cobra's length and 61,1% of its mass. Both specimens were deposited in the herpetological collection of the Port Elizabeth Museum (PEM R1521, R9970) respectively.

Ophiophagy is well documented in southern African cobras. Haagner, Branch & Hall (1993, *J. Herpetol. Assoc. Afr.* **42:** 40) reported on the predation of a juvenile Puffadder by a Cape Cobra, while Haagner (1990, *J. Herpetol. Assoc. Afr.* **37:** 47) reported on a similar sized Puffadder swallowed by an adult *Naja a. annulifera*. Broadley (1959, *Bull. Mus. Comp. Zool.* **120**(1): 1-100) recorded a large Puffadder from the stomach of a Zimbabwean *Naja a. annulifera*, and Noble (1988, *Afr. Wildl.* **42**(2): 233) photographed predation by an Egyptian Cobra on an adult Puffadder in Mkuzi Game Reserve, Zululand. However, very few authors have reported on relative prey size.

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GEOGRAPHICAL DISTRIBUTION

African Herp News publishes brief notes of new geographical distributions (preferably at least 100 km from the nearest published record) of amphibians and reptiles on the African continent and adjacent regions, including the Arabian peninsula, Madagascar, and other islands in the Indian Ocean.

A standard format is to be used, as follows: **SCIENTIFIC NAME; Common name** (for source, see Life History Notes); **Locality** (country, province or state, location, latitude and longitude if available and quarter-degree grid unit; elevation above sea level; use metric distances); **Date** (day, month, year); **Collector(s); Place of deposition and accession number** (required); **Comments** (including data on size, colour and scalation, especially for taxonomically problematic taxa; and nearest published record/s in km; references to be quoted in text); Submitted by: **NAME**, address (in brackets). Observation records are acceptable only in exceptional circumstances (as in the case of large or easily identifiable reptiles, *e.g.* pythons, tortoises). Records submitted should be based on specimens deposited in a recognised institutional collection (private collection records are discouraged).

New South African province names must be used.

Notes submitted in an incorrect format/style will be returned to the authors.

SAURIA

GEKKONIDAE

HEMIDACTYLUS MABOUIA (Moreau de Jonnes, 1818): Tropical House Gecko; South Afica; two localities: (1) Eastern Cape province, Bedford (32°42'S; 26°04'E; 3226CA); 19 February 1994; M. Snyman; Port Elizabeth Museum (PEM R8852); gravid female (52 + 61 = 113 mm) caught on a large Sasko cargo truck. She was kept in captivity and laid one egg on 22 February 1994, after which she died, containing another fully developed egg; (2) Free State province, Gariep Dam wall, district Philippolis (30°38'S; 25°30'E; 3025Da); 14 December 1994, G.V. Haagner and A.W. Viljoen; PEM R11986, gravid female (SVL 52 mm) caught on wall of public toilets on the dam wall.

Although the occurrence of *H. mabouia* in the Eastern Cape is known (Haacke, pers. comm.), it remains unpublished. The first known specimen was collected on 29 May 1980 when a single male was found in the Port Elizabeth harbor in cargo from Durban (PEM R1881). Subsequently, it was collected in several areas in the Eastern Cape: East London (PEM R4917 - May 1989; PEM R7059 - February 1992); Addo Elephant National Park (PEM R4388 - November 1988); Lorraine, Port Elizabeth (PEM R6435 - September 1990) and North End, Port Elizabeth (PEM R10264 - November 1994). Reports have also been received of a colony which has become established in the vicinity of Simonstown in the Cape Peninsula, Western Cape province, but this needs to be verified (Baard, pers. comm.). Verbal reports have been received of a "white" gecko seen on the walls of the ablution block in the Plettenberg Bay Caravan Park, but two subsequent inspection trips have revealed only a single *Phyllodactylus porphyreus*, a species common in the area.

On 4 January 1996, whilst stationary at traffic lights in Gezina, Pretoria (25°43'S; 28°13'E; 2528Ca), an adult *H. mabouia* was observed by D.C. Viljoen, A.W. Viljoen and the first author, while running on the adjacent vehicle. It emerged from the side-view mirror housing and moved along the window edge towards the back of the vehicle. Attempts to draw the drivers' attention failed and the vehicle moved on through the traffic. The occurrence of the Bedford specimen on a large truck, and this subsequent sighting on a sedan, emphasizes the ease at which these animals are transported between localities. The Gariep Dam site is a popular "pit stop" for visitors (with caravans) on their way to the Cape.

The colonization of suitable habitat in KwaZulu-Natal has been discussed by Bourquin (1987, *Lammergeyer* **38:** 12-14). Bates (1992, *The Herpetofauna of the Orange Free State - with special emphasis on biogeographical patterning*, M.Sc. thesis, University of Natal, Durban) reported on a juvenile specimen collected on the farm Ben Nevis on Thaba Phatshwa Mountain, while Douglas (1990, *J. Herpetol. Assoc. Afr.* **37:** 55-56) reported on a thriving introduced population in Bloemfontein.

Acknowledgements: Gratitude is extended to the following persons who assisted with the collection of the above material: Dianne Farrell, Morne Snyman and Andre Viljoen.

Submitted by: **G.V. HAAGNER & W.R. BRANCH** (Department of Herpetology, Port Elizabeth Museum, P.O. Box 13147, Humewood 6013, South Africa).

LYGODACTYLUS CAPENSIS CAPENSIS (A. Smith, 1849): Cape Dwarf Gecko; South Africa, Eastern Cape province: two localities: i) Kabeljous River bridge (33°58'S, 24°52'E; 3324DD), Humansdorp district; 16 June 1992; C.J. McCartney; deposited in the herpetological collection of the Port Elizabeth Museum (PEM R7341). An adult female (35 + 28 = 67 mm) found active on a large *Opuntia* plant in Valley Bushveld. It had 2 nasals, the rostral and first labial contacted the nostril, 1 internasal, 3 postmentals, lamellae under 4th toe 5, throat with irregular grey speckling. Gravid with one well developed egg in each oviduct (6,9 x 4,1 mm), swollen endolymphatic glands and an empty stomach; ii) Port Alfred (33°43'S, 26°54'E; 3326Db; 7 m a.s.l.), Bathurst district; 20 October 1995; D. Riley; found active on house in the marina. Two specimens: PEM R12029 - adult female (SVL 34 mm, tail broken) with 3 nasals, rostral and first labial contacting the nostril, mental with lateral clefts, 1 internasal, 3 postmentals, lamellae under 4th toe 5, throat with grey speckling. Gravid with one well developed egg (6,8 x 4,2 mm) in each oviduct, stomach empty. PEM R12030 - adult male (32 + 17 mm, tail tip missing) with 2 nasals, only first labial contacting nostril, 1 internasal, 3 postmentals, lamellae under fourth toe 5, preanal pores 5, testes appeared swollen (3,1 x 1,8 mm), stomach empty.

The occurrence of this species in the Eastern Cape is not surprising as Branch & Haagner (1993, *J. Herpetol. Assoc. Afr.* **42:** 35) reported on the reproductive success of an introduced population in Port Elizabeth. The occurrence of the Kabeljous River specimen is unusual as it was found far from any human development, although fairly close to the popular Jeffrey's Bay. These additional records appear to indicate that populations in the Eastern Cape are expanding.

Acknowledgements: Chris McCartney is thanked for donating the Kabeljous River specimen to the Port Elizabeth Museum.

Submitted by: **G.V. HAAGNER & W.R. BRANCH** (Department of Herpetology, Port Elizabeth Museum, P.O. Box 13147, Humewood 6013, South Africa).

CHAMAELEONIDAE

CHAMAELEO INCORNUTUS Loveridge, 1932: Ukinga Hornless Chameleon; Malawi, Rumphi district, Nyika National Park, near Chelinda Camp (1033DB); 1 May 1996; C.M.R. Kelly; Natural History Museum of Zimbabwe, NMZB 14423. This male specimen was picked up in a spotlight when it was asleep about 4 m above ground near the periphery of an isolated patch of montane forest between Chelinda and Zovo-Chipolo Forest. It was kept alive for a month but refused to feed. The specimen was photographed while alive. It was yellow-green above, becoming pale grey below. The top of the head and occipital flaps were largely red-brown, and there was a series of three large white oval markings, separated by red-brown diabolo-shaped markings. This colour pattern differs somewhat from that of the holotype male described by Loveridge (1932, *Bull. Mus. comp. Zool. Harv.* **72:** 380). Unfortunately only female and juvenile paratypes are available in Bulawayo for comparison. This is the first record of this rare species from Malawi, representing a range extension of about 160 km south from Rungwe Mountain. *C. incornutus* was considered endemic to south-western Tanzania, having also been recorded from the Ukinga and Poroto mountains. It seems likely that this chameleon will eventually be found in the surviving forest patches on the Misuku Hills and on the Zambian sector of the Nyika Plateau.

Submitted by: **D.G. BROADLEY** (Biodiversity Foundation for Africa, P.O. Box FM 730, Famona, Bulawayo, Zimbabwe) & **C.M.R. KELLY** (8 Shirley Road, Borrowdale, Harare, Zimbabwe).

SERPENTES

TYPHLOPIDAE

RHINOTYPHLOPS PALLIDUS (Cope, 1868): Pallid Blind Snake; Tanzania, Tanga Region, Muheza district, Kwamarimba Forest Reserve (05°01'S; 38°43'E; 0538Ba2; 175 m a.s.l.; 19 November 1995; Ms P. Cunneyworth of Frontier-Tanzania (a collaboration between the University of Dar es Salaam and the Society for Environmental Exploration in the United Kingdom); Natural History Museum of Zimbabwe, NMZB 14290. The specimen was taken in camp by hand and a DNA tissue sample taken. Length when fresh 170 + 5 = 175 mm, diameter 3 mm. Transverse scale rows at 100th longitudinal scale = 22, longitudinal scales 376, the lowest figure recorded, showing affinities with the Tana Delta population in N.E. Kenya (380-412), rather than those from Zanzibar Island (421-433) or southern Sudan (449-466) (data from Roux-Estéve, 1974, *Mém. Mus. natn. Hist. nat. Paris*, Sér. A, **87:** 288). This is the first record from the Tanzanian mainland, although the species has been recorded from Mombasa (Loveridge, 1916, *J. E. Afr. Uganda nat. Hist. Soc.* **5:** 82) and Pemba Island (Boettger, 1913, in Voeltzkow, *Wiss. Ergebn. Reise Ostafr.* **3:** 351). The habitat for the present specimen was scrub woodland (old shamba land), but the area was certainly forested twenty years ago and the forest reserve is only about 650 m from the camp site. This species is an atypical member of the genus *Rhinotyphlops* because it lacks an angular keratinized horizontal edge to the snout, in this respect resembling *R. boylei* FitzSimons, recently transferred from *Typhlops* by Wallach (1994, *Bull. Inst. roy. Sci. nat. Belg. Biol.* **64:** 218).

Submitted by: **D.G. BROADLEY & S. BROADLEY** (Biodiversity Foundation for Africa, P.O. Box FM 730, Famona, Bulawayo, Zimbabwe).

COLUBRIDAE

PSAMMOPHIS SUBTAENIATUS SUBTAENIATUS Peters, 1882: Stripe-bellied Sand Snake; South Africa, KwaZulu-Natal, Ubombo district, Lebombo Mountain Nature Reserve (between 27°33' to 27°35'S and 32°02' to 32°05'E; 2732Ca1). A young female was killed in the yard of one of the residents and donated to the Transvaal

Museum (TM 79739) by H. Hibbett. The area had closed woodland of Lebombo bushveld type with coastal scarp forest in deeper gorges. Length 541 + 312 = 853 mm; 17 dorsal scale rows, 160 ventrals, 119 subcaudals, anal plate divided. A second, badly damaged specimen was found dead on the entry road into the reserve, and was disposed of after confirming its identity. These records confirm the presence of this snake in KwaZulu-Natal, extending the published range (Broadley, 1990, *FitzSimons' Snakes of Southern Africa*, Jonathan Ball and Donker Publishers, Johannesburg) by about two degrees towards the south. The occurrence of this species in the lowveld and Lubombo regions of Swaziland was confirmed by Boycott (1992, *A herpetofaunal survey of Swaziland*, M.Sc. thesis, University of Natal, Durban, 175 pp.)

Submitted by: **W.D. HAACKE** (Department of Herpetology, Transvaal Museum, P.O. Box 413, Pretoria 0001, South Africa) & **H. HIBBETT** (Wildlife Services, Private Bag X501, Mkuze 3965, South Africa).

CRYPTODIRA

CHELONIIDAE

ERETMOCHELYS IMBRICATA (Linnaeus, 1766): Hawksbill Turtle; South Africa, Western Cape province, Malmesbury district, Silverstroom beach, Atlantic Ocean (33°35'S, 18°21'E; 3318CB); 14 July 1994; I. Campbell; Port Elizabeth Museum (PEM R11854, shell and skull). Young subadult female found washed ashore. Collected and forwarded to the Port Elizabeth Oceanarium where she was housed in the large gully tank. All attempts at feeding were unsuccessful, probably due to low water temperatures (16°C). She died shortly afterwards and measured 390 mm carapace length, 353 mm carapace width, 284 mm plastron width; mass 2,4 kg. Scuttelation is as follows: 5 vertebrals, 4 pairs of costals, 12 left and 11 right marginals with a divided supracaudal, and a single nuchal. Bourquin & Boycott (1988, *The South African Tortoise Book*, Southern Books, Halfway House) report that hawksbills are seldom encountered and records appear to be scanty. Their distribution map shows that the normal range extends to the vicinity of Mossel Bay in the Western Cape. This therefore appears to be the first record for the west coast of South Africa. Reports of marine turtles in the cold waters of the west coast are not uncommon, and Tarr (1987, *Madoqua* 15(3): 267-268) reported on non-nesting emergence of *Chelonia mydas* at the Cunene River, Namibia.

Acknowledgements: Mr Ian Campbell is thanked for forwarding the turtle and details of its capture; and Mr S. Warren is thanked for assistance in housing and feeding the specimen.

Submitted by: **G.V. HAAGNER** (Department of Herpetology, Port Elizabeth Museum, P.O. Box 13147, Humewood 6013, South Africa).

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BOOK REVIEW

Captive Management and Conservation of Amphibians and Reptiles. James B. Murphy, Kraig Adler & Joseph T. Collins (eds.), 1994. 408 pp. Society for the Study of Amphibians and Reptiles, Ithaca, New York. (Contributions to Herpetology No. 11). US $58.00 (cloth).

This large book (285 x 220 mm) is based on the proceedings of a symposium of the same title held at a joint meeting of the Society for the Study of Amphibians and Reptiles (SSAR) and Herpetologist's League in 1991. It is dedicated to Roger Conant, one of America's greatest living herpetologists and author of the first field guide to the herps of eastern America, which has now sold over 500 000 copies! During Conant's life, zoos have grown from little more than menageries to centres of conservation, display and research. In no small part, this is due to the early studies, exhibits and publications of Conant.

In some ways the present book returns to the theme of the very first volume in the SSAR "Contribution" series, "Reproductive Biology and Disease of Captive Management", which was edited by two of the current editors (JBM and JTC). The latest volume includes 41 chapters, grouped under the topics: Dedication and General Issues (4), Management Issues (8), Reproductive Biology (8), Model Programs for Amphibians (5), Model Programs for Reptiles (13), Future Directions (3) and Special Techniques (1). With a preponderance of American authors (there is not one from Africa) the articles obviously have a Palaearctic and Neotropical bias, but Madagascan topics are well represented, with discussions on: Reproductive strategies, breeding and conservation of tropical frogs: dart-poison frogs and Malagasy poison frogs (E. Zimmermann and H. Zimmermann), Husbandry of captive day geckos (*Phelsuma*): Past present and future (T. Tytle), Long-term breeding program with the giant day gecko (*Phelsuma madagascariensis*) at the National Zoological Park (B. Demeter and G. Birchard), and Old World chameleons in captivity: Growth, maturity and reproduction of Malagasy panther chameleons (*Chameleo pardalis*) (G. Ferguson). The low African emphasis is mitigated for local herpetologists by the quality and breadth of the 16 reviews in the sections on Management Issues and Reproductive Biology. All are of high quality, and with the possible exception of two articles on salamanders and teiids, the others cover topics that will be of interest to any person involved with the captive maintenance of reptiles or amphibians.

An interesting and challenging article by B.F. Backner concerns the "Future role of the private sector in breeding endangered species". It notes that the estimated current carrying capacity in all American zoos for captive breeding programs (CBPs) for endangered amphibians is only 15 species. In southern Africa alone, four amphibians are considered already endangered, and a number of recently described (*Bufo robinsoni*) or redefined (*Arthroleptella lightfooti*) species may also fall into this category. None of these species are protected by any form of CBP, and in the case of *Heleophryne* and *Microbatrachella* we have only minimal understanding of their reproductive requirements. We are therefore in danger of duplicating the story of the Golden Toad (*Bufo periglans*), which was known to have a very localized distribution in Costa Rica, but was considered adequately protected in a National Park. Early, well-motivated proposals for CBPs for the species were rejected by conservation authorities, only to have the species dramatically decline and disappear in two breeding seasons. It is now considered extinct. Existing conservation legislation in the Cape provinces prohibits possession of all amphibians and reptiles without special,

and difficult to obtain, permits. With cutbacks in their research funding, no provincial conservation authority will be in a position to undertake basic reproductive studies that would allow experience in captive maintenance for any South African endangered reptile or amphibian to be gained. All our conservation "eggs" sit in the basket of "reserve management", even though the history of declining amphibian populations worldwide has shown this to be flawed. We need to be pre-emptive, and the role of the private sector (*i.e.* the individual) in these days of RDP (re-directed priorities) government programs deserves careful consideration.

This well-edited, well-produced and stimulating book is yet another example of the publication excellence that characterizes all SSAR productions. As the business of herpetoculture burgeons, this book should go a long way to ensuring that the animals that are the object of our research, joy or livelihood are correctly cared for. I have nothing but praise for it, and it is a fitting memorial to Roger Conant.

Reviewed by: **W.R. BRANCH** (Department of Herpetology, Port Elizabeth Museum, P.O. Box 13147, Humewood 6013, South Africa).

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HERPETOLOGICAL BOOKS

A Guide to the
Reptiles and Frogs of the Perth Region
Western Australia

by

Brian Bush, Brad Maryan, Robert Browne-Cooper and David Robinson

Published by University of Western Australia Press

Perth (capital city of Australia's largest state) is one of the most isolated cities in the world. The area supports an incredibly rich herpetofauna. With 226 pages, detailed descriptions of each species, clear colour photographs, keys to identification and extensive glossary the author's have brought together a wealth of information on the frogs, turtles, lizards and snakes inhabiting this region.

A must to any herpetologist's/naturalist's library

Only AUS $20,00 (+ $4 surface mail postage) each

Send order form and bank draft/cheque in Australian dollars to WASAH, 169 Egina Street, Mount Hawthorn 6016, Western Australia.

BIBLIOGRAPHY OF LAND LIVING TORTOISES (INCLUDING TERRAPENE SPEC.)

Parts 1 & 2

1st edition, January 1996

Compiled by

P.D. Gorseman, Prins Hendrikstraat 55, 3331 XR Zwijndrecht, The Netherlands
Telefax 0031 - 078 6123908

REGARDING THE BIBLIOGRAPHY

The bibliography contains references to articles on tortoises (land living turtles); it is to be supplemented once a year and published completely every second year. It is possible to order the bibliography, on paper or on disk (format WordPerfect 5.1/6.0/6.1). Special requests, for example other formats for adaption to other software programs are met, at least if possible. The publication is not copyrighted; when used mentioning of source is sufficient.

A number of references are marked with + on the first line. This means that the article refered to can be ordered, with the exception of recent (or reprinted) material that can still be obtained from bookstore or publisher. This service is intended for those keepers of tortoises who have no direct access to libraries of universities or such institutions.

Although many German and Dutch publications are summarized in English, many are only printed in the original language and therefore rather obscure for someone with English as native tongue. If getting acquainted with the contents of such publications is desirable, for example in the framework of study or an intended publication, a short summary in the English language can be made and sent free of charge.

All known publications pertaining to tortoises are inserted in the bibliography. Information regarding articles as yet not mentioned is highly appreciated.

REGARDING ORDERING

Parts I and II of the bibliography can be ordered from the mentioned address; prices for European countries $25,-, outside Europe $30,-. Postage (surface mail) and one supplement is included. Part I or Part II can be ordered separately; at prices of $15,- respectively $20,-. Likewise postage (surface mail) and one supplement included.

An exchange is preferred to payments, for instance in the form of a subscription to a periodical/magazine relating to herpetology. These magazines are to be included in the library of the University of Utrecht (section Dutch Society for Herpetology and Terrarium Keeping).

Prices of photocopies of articles are as follows:

1-5 pages	$ 0.25 per page
6-10 pages	$ 0.15 per page
11 pages and up	$ 0.10 per page

Prices are per page of the original article; if possible, two adjoining pages are copied to one sheet of paper. No extra is charged for postage (surface mail).

Again an exchange is preferred to payment of money, for instance in the form of copies of articles. All articles are accepted, provided that these pertain to species of tortoises mentioned in the catalogue and are not marked in the bibliography (+).

Pre-payment of the amount due is required; please send money order or cheque.

PERIODICALS RECEIVED BY THE H.A.A.

The following publications are received by the H.A.A. through exchange-memberships and other means. Articles on African herps in these publications are usually listed in the "Recent African Herpetological Literature" section of *African Herp News*. Members wishing to obtain copies of particular articles in these publications can write to the Chairman, sending return postage and 20c per page for copies.

Australasian Herp News

British Chelonia Group Newsletter

Bulletin of the Chicago Herpetological Society

Bulletin of the Maryland Herpetological Society

Froglog (IUCN/SSC Declining Amphibian Populations Task Force)

Lacerta (Dutch)

Lacerta (Newsletter) (Dutch)

New York Turtle and Tortoise Society Newsletter

Reptilia (Spanish - glossy magazine)

South Western Herpetological Society Journal

The South Western Herpetological Society Newsletter

Terrarista (Czech)

The Newsletter of the Herpetologists League

INCREASE IN H.A.A. MEMBERSHIP FEES FOR 1997

After due consideration of rising postal, printing and other costs, the H.A.A. Committee has decided to increase membership fees as follows:

ORDINARY 1 YEAR AFRICAN MEMBERSHIP from R40,00 to R50,00
ORDINARY 3 YEAR AFRICAN MEMBERSHIP from R110,00 to R135,00
SCHOLAR (AFRICAN MEMBERS ONLY) MEMBERSHIP from R30,00 to R35,00

RAND PAYMENTS FROM OVERSEAS:

1 YEAR MEMBERSHIP from R85,00 to R100,00
3 YEAR MEMBERSHIP from R230,00 to R270,00

HERPETOLOGICAL ASSOCIATION OF AFRICA

FINANCIAL STATEMENTS
for the year ended 29 February 1996

The financial statements set out on pages 2 to 4 were approved on and are hereby signed to that effect.

Chairman

Treasurer

REPORT OF THE INDEPENDENT AUDITORS TO THE MEMBERS OF HERPETOLOGICAL ASSOCIATION OF AFRICA

We have audited the annual financial statements set out on page 2 to 4. These financial statements are the responsibility of the members. Our responsibility is to report on the financial statements.

We conducted our audit in accordance with generally accepted auditing standards. These standards require that we plan and perform the audit to obtain reasonable assurance that, in all material respects, fair presentation is achieved in the financial statements. An audit includes an evaluation of the appropriateness of the accounting policies, an examination, on a test basis, of evidence supporting the amounts and disclosures included in the financial statements, an assessment of the reasonableness of significant estimates and consideration of the appropriateness of the overall financial statement presentation. We consider that our audit procedures were appropriate in the circumstances to express our opinion presented below.

In common with similar organisations, it is not feasible for the organisation to institute accounting controls over cash collections prior to the initial entry of the collections in the accounting records. Accordingly it was impracticable for us to extend our examination beyond the receipts actually recorded.

Except for the effects of any adjustments which might have been necessary had it been possible for us to extend our examination of cash collections, in our opinion these financial statements fairly presents the financial position of the Herpetological Association of Africa at 29 February 1996 and the results of its operations for the year then ended.

Cassidy & Associates
Chartered Accountants (SA)
Registered Accountants and Auditors
DURBAN

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HERPETOLOGICAL ASSOCIATION OF AFRICA

INCOME STATEMENT
for the year ended 29 February 1996

	1996	1995
Income		
Interest	4,485	2,872
Donations	3,000	0
Sale of journals	296	490
Subscriptions	16,580	13,076
Symposium	3,269	0
	27,630	16,438
Expenses		
Audit fees	550	450
Froglog	203	0
Journals	5,287	2,096
Newsletters	7,210	4,550
Bank charges	18	0
Office expenses	1,530	1,436
Sundry expenses	360	0
	15,158	8,532
Net surplus for the year	12,472	7,906

BALANCE SHEET - 29 February 1996

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	Note	1996	1995
Funds Employed			
Accumulated funds			
Balance at beginning of year		39,058	31,152
Net surplus for the year		12,472	7,906
		51,530	39,058
Employment of funds			
Current assets			
UBS - Bloemfontein		303	8
UBS - Durban		24,509	18,327
Standard Bank - Bloemfontein		17,752	15,641
Volkskas - Durban		8,754	228
Cash on hand		488	5,643
		51,806	39,847
Less :			
Current liabilities			
Accounts payable		276	789
		276	789
Net current assets		51,530	39,058

SOUTHERN AFRICAN FROG ATLAS PROJECT

What can we do to protect our frog populations?

An exciting new project, the Southern African Frog Atlas Project (SAFAP) has been initiated by Dr Phil Bishop (Wits University), Mr Les Minter (University of the North) and Mr James Harrison (University of Cape Town). This is the first of its kind in the world to be attempted on a national scale and the first frog atlas project on the African continent. This project will enable the conservation status of each species to be determined and will provide baseline information for future monitoring projects.

The project will involve many volunteers from the public sector, who will submit tape recordings of frogs calls, or specimens and visual identifications, to the project co-ordinator for analysis and computerisation. The advantage of frogs is that they produce species-specific calls enabling exact identification, without actually seeing the frog! A compact disc of South African Frog calls has been produced (available from Megatone Productions - Tel. 011 - 8873136) and is a helpful guide for the accurate identification of frogs in the field. Also, an excellent new book *South African Frogs: A complete guide* by Neville Passmore and Vincent Carruthers is now available, published jointly by Wits University Press and Southern Book Publishers. The book is an updated version of their 1979 edition, and contains several new sections. It also contains many newly discovered species of frogs as well as natural history notes. SAFAP will radically improve our understanding of frog distributions and will focus attention on declining populations. The data will also be valuable for the rational planning of land-use and will support efforts to preserve our wetlands and natural biodiversity. The outcome of this project will be that frog populations can be used in a prognostic manner with respect to the condition of the environment and hence, any impending threat to other indigenous animals.

Any funds donated in support of SAFAP will qualify for tax relief., Cheques should be made payable to the University of the Witwatersrand. If you would like to become involved in this project, please contact: The SAFAP Co-ordinator, Avian Demography Unit, University of Cape Town, Rondebosch 7700, South Africa.

HELP NEEDED: SAFAP IN LESOTHO

Lesotho is a largely mountainous country with a very poorly known frog fauna. Despite the mountainous nature of the country, certain roads are in good condition and can be travelled by car without difficulty. Your assistance in surveying the region's frogs is urgently required. Anyone interested in collecting data on the frogs of Lesotho for SAFAP is urged to contact Mike Bates, Regional Organizer for Lesotho, SAFAP, P.O. Box 266, Bloemfontein 9300, South Africa (Tel. 051-4479609, Fax. 051-4476273).

SOUTHERN AFRICAN FROG ATLAS PROJECT

On 15 November 1995 the Southern African Frog Atlas Project was launched at the Everard Read Gallery in Johannesburg; you may have seen news of it on *50/50* the following Sunday. The launch was a memorable occasion with over 100 people in attendance. Prof. Neville Passmore and Vincent Carruthers, authors of *South African Frogs*, were present to support the project.

Prof. Passmore gave an introductory talk in which he noted how fashionable it had become to be a 'birder' and flaunt all one's birding regalia. The time had arrived, he claimed, for 'frogging' to take its place as the 'in' thing to do. (Being 'green' has special significance in the world of amphibians.) He exhorted the Sandton set to don their wellies and wield their torches in the cause of SAFAP, because 'FROGS IS COOL'.

Dr Phil Bishop, also of Wits University, followed up with a slightly more serious but no less entertaining talk about the diversity of South African frogs and some of their bizarre mating habits. He also emphasized the range of threats arrayed against our little green friends, and pointed out how relevant their well-being is to the state of the environment in general, and to our own welfare in the world.

After these excellent talks, guests were entertained by recorded frog calls while they examined the fascinating live specimens in a number of aquaria and terraria, and sipped delicious port and sherry supplied by Paddagang Wineries of Tulbagh. Christine Read and Evelyn Abendanon of Pangolin Projects were largely responsible for organizing this gala occasion, and Mark Read of the Everard Read Gallery provided a magnificent venue free of charge, with the added fortuitous bonus of a wildlife art exhibition to admire. There were even some sculptures of frogs!

The best news is that we now have some introductory materials ready, so you can begin to atlas frogs! Just send the participation form in this issue to us – if you did not do so last time – and we will forward the materials to you as soon as possible.

The bad news is that we do not yet have a sponsor for this important project. If you have a constructive suggestion to make on how to raise a lot of money fast, please drop us a line!

James Harrison
Project Manager

✧ ✧ SOUTHERN AFRICAN FROG ATLAS PROJECT ✧ ✧

Report on first AGM, 14 August 1996 held at Paddagang, Tulbagh

All but one of the regional organizers were present – an excellent turnout!

Phil Bishop welcomed everyone and introduced two new Regional Organizers (ROs), Mervyn Mason for Gauteng and Graham Alexander for KwaZulu-Natal. These gentlemen will take over from Phil who is unfortunately emigrating to New Zealand.

The ROs presented brief verbal reports on the progress made in the provinces over the past year. A highlight was the impressive amount of publicity generated by Phil and the encouraging amount of interest generated amongst the public. Approximately 400 introductory packages have been distributed to potential volunteers. Another highlight was Louis du Preez's initiative in getting schools involved in the collection of tadpole specimens in the Free State.

Actual data collection has got off to a slow start, partly because of a late start in 1995, with approximately 80 forms having been submitted to ROs by approximately 60 different atlasers. These 60 atlasers represent approximately 25% of the people who have received introductory packages, which is a good percentage, but the amount of data is small. It is clear that ROs will need to be proactive in contacting volunteers, encouraging them, allocating specific tasks, and even providing a certain amount of training.

Phil announced that the coordination of the project would henceforth be in the hands of Les Minter (University of the North) and James Harrison (ADU, University of Cape Town).

It was clear from the meeting that everyone wanted to see the project continue and that there was a general confidence that the job could be done.

James led a discussion on goals and methods. Consensus was reached that the objectives of SAFAP, in rank order, are to:

a) Compile comprehensive distribution maps for all species (including new species which may be discovered), on a quarter-degree grid, in South Africa, Lesotho and Swaziland. The database would also allow for the compilation of complete checklists for regions and grid cells.
b) Determine the presence of species in protected areas and characterize the conservation status of each species.
c) By-products of the data-collection process would be information on population size, breeding seasons, and habitat correlations.
d) Produce an atlas publication.

Operational goals for data collection are:

* **The ideal:** 100% of species recorded, in all months in which breeding takes place, in each grid cell and protected area, with additional information on habitat and numbers.
* **The minimum:** The majority of species recorded, in each grid cell.

It was decided that repeat visits to localities are desirable, but this should not be done at the expense of comprehensive coverage, i.e. visiting all cells. Such repeat visits should not be more frequent than once a week.

An appropriate *modus operandi* for achieving the goals was discussed. The important elements are:

a) Submit all existing data from notebooks, voucher specimens, literature, etc., as soon as possible so that rapid progress can be demonstrated. While all historical data can be computerized, only data collected from 1 January 1990 will be used in the atlas.
b) Find the 'magic' number of keen volunteers by means of local publicity and following up existing contacts.
c) Persuade each volunteer to 'adopt' an appropriate number of cells and to achieve comprehensive coverage of each.
d) Monitor progress in relation to a predicted number of species per cell, and liaise directly with volunteers to encourage and assist improvements.
e) Mount special expeditions to (i) unallocated cells and (ii) montane areas.
f) Raise funds to support local fieldwork.

Specific issues needing resolution were discussed and decisions taken. The decisions were:

* Barring setbacks, fieldwork will end in 1999 and the atlas publication will be compiled in 2000.
* The atlas will not include data older than 1 January 1990.
* Volunteers are not generally encouraged to collect live specimens. Frogs found dead may be submitted and limited numbers of tadpoles may be collected in those provinces where the ROs are prepared to ID them.
* Atlas data should be made available to all comers, provided that the intention is not to produce a product which seriously preempts the atlas publication; other publications are not a problem.
* Cassette tapes with recordings of calls should be retained and archived. Atlasers are encouraged to fill up a tape before submitting it. The policy of archiving tapes will be reviewed at the 1997 AGM.

Alan Channing led a very interesting and informative workshop on tadpole identification during which ROs were given an identification key for future use.

It was clear that tadpoles are potentially useful for species identification and therefore for atlasing, but that there are practical difficulties. Identification of tadpoles and the use of the key require some practice in order to become familiar with the degree of variation in various features. Identification to species level is not always possible, although what is already known about species' distributions can help in this regard. On the other hand, one needs to guard against making assumptions. It was decided that ROs should decide for themselves how much they wish to use tadpoles in atlasing.

The meeting was closed with the presentation of the *South African Frogs* book and CD to Murray Angus-Lepan of Paddagang. Neville thanked Phil, the ADU, ***PADDAGANG, LIBERTY LIFE***, Allan Channing, and all the ROs for their respective contributions to a successful meeting.

James Harrison and Les Minter*
***University of the North**

PS Note the following addresses for the new ROs:
Gauteng: Mr Mervyn Mason, Department of Zoology, Wits 2050 (as from 1 Dec. 1996).
KwaZulu-Natal: Dr Graham Alexander. Department of Zoology, Wits 2050.

PADDAGANG

LIBERTY LIFE

From left to right (back): L. du Preez (Free State), J. Harrison (ADU), P. Bishop (Wits), M. Mason (Gauteng), A. Channing (Northern Cape), R. Boycott (Swaziland), L. Minter (Northern Province), M. Bates (Lesotho); (front) E. Baard (Western Cape), N. Passmore (Wits), M. Burger (Eastern Cape), R. Newberry (North-West Province), J. Theron (Mpumalanga) and A. de Villiers (Western Cape).

HERPETOLOGICAL ASSOCIATION OF AFRICA
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HERPETOLOGICAL ASSOCIATION OF AFRICA
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