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# AFRICAN HERP NEWS

NO. 23: AUGUST 1995

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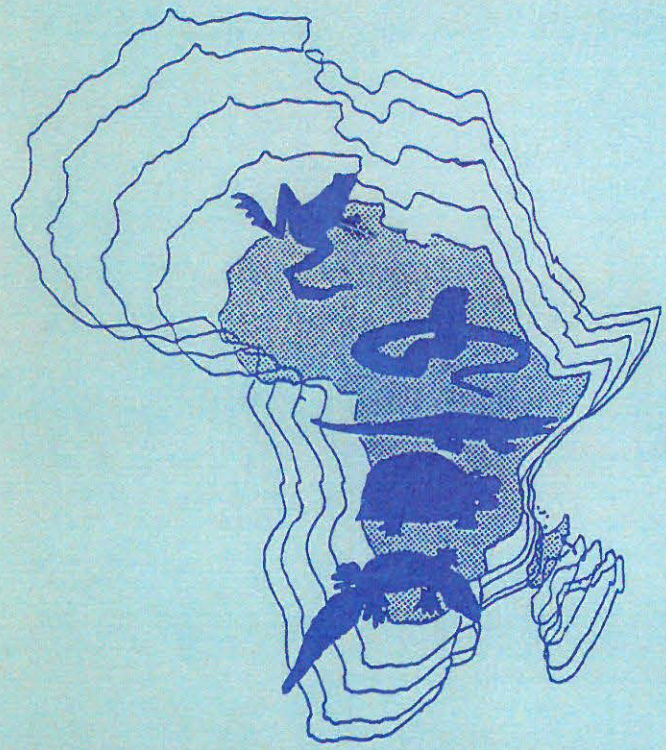
# AFRICAN HERP NEWS

## HERPETOLOGICAL ASSOCIATION OF AFRICA NEWSLETTER



AUGUST 1995 NO. 23

## HERPETOLOGICAL ASSOCIATION OF AFRICA

**Founded 1965**
The H.A.A. is dedicated to the study and conservation of African reptiles and amphibians. Membership is open to anyone with an interest in the African herpetofauna. Members receive the *Journal of the Herpetological Association of Africa* (which publishes review papers, research articles, short communications and book reviews - subject to peer review) and *African Herp News* (H.A.A. Newsletter) 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 and news items appearing in *African Herp News* may be reprinted, provided the author's name and newsletter reference are given.

**Typist:**
Mrs H. de Villiers, National Museum, Bloemfontein.

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**HONORARY LIFE MEMBERS**
**Dr R. Laurent, Prof. J.C. Poynton, Dr C. Gans, Dr D.G. Broadley.**



# EDITORIAL

The time has almost arrived for the *Fourth H.A.A. Symposium on African Herpetology*. As you most probably know by now, this event will be held at St Lucia in KwaZulu-Natal from 23 to 27 October 1995. Orty Bourquin assures me that all necessary arrangements have gone according to plan. All *you* have to do is get yourself there. A final notice and preliminary programme appear in this issue of *African Herp News*. As you will see, a very exciting list of talks awaits you. If you have not yet registered, do so now, or miss out on what may well be the biggest and best H.A.A. symposium so far!

Two overseas guest speakers have been invited to present papers at the symposium. **Prof. Richard Tinsley** (University of Bristol, England) will present a paper entitled *Diversity, geographical distribution and general biology of the genus Xenopus*, while **Prof. Craig Weatherby** (Adrian College, Michigan, U.S.A.; attendance to be confirmed) will talk about *The behaviour and ecology of Geochelone pardalis*. Other papers cover topics such as biodiversity, distribution, conservation, taxonomy, ecology, morphology and reptile husbandry. There will also be a special Conservation Workshop towards the end of the symposium.

I have not received any proposals for candidates for the *Exceptional Contribution to African Herpetology* award, which will therefore not be presented at St Lucia.

The new H.A.A. committee will be announced at the symposium and the results published in the next issue of *African Herp News*, due out in December 1995.

As you will know, special issues of the H.A.A. journal (numbers 36 and 40) were published to document the proceedings of both the first and second H.A.A. symposia on African herpetology. Members will be pleased to know that, thanks to a generous donation from ESKOM, a special issue of the journal is currently being prepared to include summaries of papers dealing with the various southern African lizard families (presented during the *FitzSimons Day* session) and extended abstracts of other papers and posters, all presented at the *Third H.A.A. Symposium on African Herpetology* held at the Transvaal Museum in Pretoria from 11 to 15 October 1993. This special issue will be sent to members later this year. The next "regular" journal, vol. 44(2), will also be posted later this year.

Finally, I thank all contributors of articles and news items for this issue of *African Herp News*.

See you at St Lucia.

**Mike Bates**
**CHAIRMAN/NEWSLETTER EDITOR**

# FOURTH H.A.A. SYMPOSIUM ON AFRICAN HERPETOLOGY

## *BIODIVERSITY AND CONSERVATION OF AFRICAN HERPETOFAUNA*

## FINAL NOTICE

St Lucia

23 - 27 October 1995

Arrangements for the fourth H.A.A. Symposium are going well. A preliminary programme is presented below. Finalization is being hampered by "new" paper contributions which are still coming in. We hope that by the time you get this newsletter your abstracts and symposium fees will be in!

Those of you needing transport from Durban or Richards Bay airports must please let us know your flight number and time of arrival.

The venue is easily found - simply ask for the Natal Parks Board Offices on arrival at St Lucia.

See you there!
ORTY BOURQUIN
Chairman of Organizing Committee
P.O. Box 662
Pietermaritzburg 3200
South Africa

Tel. 0331-471961
Fax. 0331-471037

### PROGRAMME

| | | |
|---|---|---|
| **SUNDAY, 22** | Registration | 15h00 - 18h00 |
| **MONDAY, 23** | Registration<br>Tea/Coffee | 08h00 - 09h00 |
| | Opening and Welcome<br>Dr G. Hughes, Chief Executive, Natal Parks Board | 09h00 - 09h10 |
| | Announcements | 09h10 - 09h20 |
| | Guest Speaker<br>**Tinsley**<br>1. Diversity, geographical distribution and general biology of the genus *Xenopus* | 09h20 - 10h00 |
| | **Hughes**<br>2. The Tongaland turtle story | 10h00 - 10h20 |





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| **Bates**<br>3. Herpetofauna of the nature reserves and national parks of the Free State province of South Africa | 10h20 - 10h40 |
| **TEA** | 10h40 - 11h05 |
| **Bates**<br>4. Distribution and diversity of amphibians and reptiles in Lesotho | 11h05 - 11h25 |
| **Boycott**<br>5. Distribution of herpetofauna in Swaziland | 11h25 - 11h45 |
| **Bourquin**<br>6. Distribution of non-marine reptiles in KwaZulu-Natal | 11h45 - 12h05 |
| **BREAK** | 12h05 - 12h20 |
| **Kyle, Haagner & Branch**<br>7. Diversity and conservation status of herpetofauna in Tongaland | 12h20 - 12h40 |
| **Baard**<br>8. Conservation status of the new Western Cape Province herpetofauna | 12h40 - 13h00 |
| **LUNCH** | 13h00 - 14h00 |
| **Raw**<br>9. Dwarf chamaeleon distribution in South Africa | 14h00 - 14h20 |
| **Haacke**<br>10. Review of tiger snakes in southern Africa | 14h20 - 14h40 |
| **Herman**<br>11. Phylogeny of South African vipers, molecular and morphological evidence | 14h40 - 15h00 |
| **Poynton**<br>12. Diversity and conservation of African bufonids | 15h00 - 15h30 |
| **TEA** | 15h30 - 15h55 |
| **Boycott**<br>13. Distribution and status of *Heleophryne natalensis* | 15h55 - 16h15 |

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|---|---|---|
| | **Minter** | |
| | 14. The advertisement call of *Breviceps mossambicus* | 16h15 - 16h35 |
| | **Smit** | |
| | 15. The amphibians of southern Africa (Slideshow) | 16h35 - 17h25 |
| | **ICE BREAKER** | |
| | **Drinks and Snacks** | 18h30 |
| **TUESDAY, 24** | Tea/Coffee | 07h30 - 08h00 |
| | Announcements | 08h00 - 08h10 |
| | **Branch, Bauer and Good** | |
| | 16. A revision of *Phyllodactylus lineatus/ essexi* complex | 08h10 - 08h30 |
| | **Branch, Bauer and Good** | |
| | 17. A new species of gecko allied to *Pachydactylus namaquensis* from the Western Cape | 08h30 - 08h50 |
| | **Bauer** | |
| | 18. Phylogenetic systematics of *Rhoptropus* | 08h50 - 09h10 |
| | **BREAK** | 09h20 - 09h35 |
| | **Mouton and Van Wyk** | |
| | 19. Evolutionary history of the African cordylid lizards: a cold origin | 09h35 - 10h00 |
| | **Heideman** | |
| | 20. Reproductive strategies of agamas in Namibia | 10h00 - 10h20 |
| | **Mason and Alexander** | |
| | 21. Oviposition site selection in *Tetradactylus africanus* | 10h20 - 10h40 |
| | **TEA** | 10h40 - 11h05 |
| | **Wright and Mouton** | |
| | 22. Sexual dimorphism in *Cordylus macropholis* | 11h05 - 11h25 |
| | **Haagner** | |
| | 23. Sexual dimorphism in Eastern Cape dwarf chameleons | 11h25 - 11h45 |
| | **Haagner** | |
| | 24. Notes on the ecology of two *Varanus* species in the Eastern Transvaal | 11h45 - 12h05 |





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|---|---|---|
| | **BREAK** | 12h05 - 12h20 |
| | **Egan, Haagner and Branch** | |
| | 25. Natural diet of some southern African snakes | 12h20 - 12h40 |
| | **Egan and Branch** | |
| | 26. Feeding behaviour of the Puff-adder *Bitis arietans*: effects of prey size | 12h40 - 13h00 |
| | **LUNCH** | 13h00 - 14h00 |
| | **Egan and Branch** | |
| | 27. Post-strike prey trailing in the Puff-adder *Bitis arietans* | 14h00 - 14h20 |
| | **Olivoch** | |
| | 28. The morphology and histology of the venom apparatus of *Pelamus* | 14h20 - 14h40 |
| | **Krugel & Du Preez** | |
| | 29. The critical evaluation of keratinised mouthpart morphology, as taxonomic characters for *Cacosternum boettgeri* tadpoles | 14h40 - 15h00 |
| | **BREAK** | 15h00 - 15h10 |
| | **Du Preez** | |
| | 30. The effect of surface area in *Kassina senegalensis* tadpoles on the infection success of *Polystoma australis* (Monogenea: Polystomatidae). | 15h10 - 15h30 |
| | **Tilbury** | |
| | 31. Trans-Africa: in a Toyota made for two! (Slideshow) | 15h30 - 16h00 |
| | **TEA** | 16h00 - 16h20 |
| | **ANNUAL GENERAL MEETING** | 16h20 - 17h45 |
| | **COMMITTEE MEETING** | 18h00 - 19h30 |
| **WEDNESDAY, 25** | Announcements | 08h00 - 08h10 |
| | Guest Speaker | |
| | **Weatherby** | |
| | 32. *Geochelone* behaviour and ecology | 08h10 - 08h40 |
| | **Mason and Weatherby** | |
| | 33. Home range of *Geochelone* | 08h40 - 09h00 |

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|---|---|---|
| | **Welman**<br>34. The origin of crocodiles. | 09h00 - 09h20 |
| | **BREAK** | 09h20 - 09h35 |
| | **Leslie**<br>35. Role of the Nile crocodile in the Lake St Lucia ecosystem | 09h35 - 09h55 |
| | **Leslie**<br>36. Nesting ecology of the Nile Crocodile at St Lucia | 09h55 - 10h15 |
| | **Blake**<br>37. Crocodiles as a resource in KwaZulu-Natal | 10h15 -10h30 |
| | **TEA** | 10h30 - 11h00 |
| | Crocodile Centre tour | 11h30 - 12h30 |
| | **LUNCH AT CROCODILE CENTRE** | 12h30 - 13h30 |
| | Poster, literature viewing and tea | 13h30 - 16h30 |
| | **Channing**<br>38. Non-South African frogs (Slideshow) | 16h30 - 17h00 |
| **THURSDAY, 26** | Announcements | 08h00 - 08h10 |
| | **Ritter**<br>39. The Transvaal Museum collection - past, present and future | 08h10 - 08h30 |
| | **De Villiers**<br>40. The effect of noise on captive reptiles | 08h30 - 08h50 |
| | **Pieterse and De Villiers**<br>41. Death on the roads | 08h50 - 09h10 |
| | **BREAK** | 09h10 - 09h25 |
| | **Channing**<br>42. Tadpoles and water quality | 09h25 - 09h45 |
| | 43. Title to be announced | 09h45 - 10h05 |
| | **Bishop**<br>44. Declining amphibian populations and the Frog Atlas | 10h05 - 10h25 |





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| | **Pieterse**<br>45. Conservation and education | 10h25 - 10h45 |
| | **TEA** | 10h45 - 11h05 |
| | **Simelane and Raw**<br>46. Beliefs in, and uses of, reptiles by Zulu and Xhosa communities | 11h05 - 11h25 |
| | **Burger**<br>47. Amphibians and reptiles in the exotic pet trade | 11h25 - 11h45 |
| | **Tilbury**<br>48. World trade in chameleons | 11h45 - 12h05 |
| | **BREAK** | 12h05 - 12h20 |
| | **Howell**<br>49. Approaches to the conservation of Tanzanian amphibians and reptiles | 12h20 - 12h40 |
| | **Bodbijl**<br>50. Gaboon adder conservation in KwaZulu-Natal | 12h40 - 13h00 |
| | **LUNCH** | 13h00 - 14h00 |
| | Conservation workshop: Theme outlines | 14h00 - 15h00 |
| | Boat trip: Santa Lucia | 16h00 - 18h00 |
| | **BRAAI** | 18h00 |
| **FRIDAY, 27** | | |
| | Coffee/Tea | 08h00 - 08h20 |
| | Announcements | 08h20 - 08h30 |
| | Conservation workshop | 08h30 - 10h00 |
| | **TEA** | 10h00 - 10h20 |
| | Conservation workshop | 10h20 - 12h20 |
| | **END OF SYMPOSIUM** - Final announcements and farewells | 12h20 - 12h30 |

HERPETOFAUNA ON STAMPS

Part 4: Tortoises and terrapins

O. Bourquin & P. Sura

In this article the Testudines, excluding the families Dermochelyidae and Cheloniidae (Sea turtles), are dealt with. A detailed list of sea-turtles on stamps is available (produced by other authors) and can be copied to interested parties. The list is complete up to January 1994.

Because of taxonomic changes, the species will be listed by their present names, as indicated in (we hope!) the latest literature. Synonyms will be listed with a reference to the present name. It is sometimes difficult to identify the species from the stamp, for example, if no name has been given and graphic details are poor. Often countries will illustrate species which do not occur in those countries, and then further confusion may arise. The information presented here is not completely up to date for the last three years, and we would welcome information on any omissions.

A listing of stamps on which Testudines are depicted as symbols, cartoons or as very stylized has been omitted.

*Agrionemys horsfieldi*
Afghanistan 1966.


*A. horsfieldi*

*Aldabrachelys elephantina*
Seychelles 1938 (5), 1941 (4), 1942, 1952 (8), 1954 (3), 1972 (2), 1978 (2), 1985 (2), 1986, 1988, 1991, 1993; British Indian Ocean Territories 1971; Comoro Islands 1977; Seychelles Outer Islands 1980, 1982, 1983, 1984, 1985 (5), 1987 (4); Great Britain 1982; Tanzania 1985; Kampuchea 1987; Tanzania 1990.

*Apalone spinifera*
Canada 1978.


Imperf. plate proof: 1941


1985

*Aldabrachelys elephantina*





*Aspideretes gangeticus*
Kampuchea 1983. Although no specific name is indicated, the eye-like markings are thought to represent a young *A. gangeticus*.

*Asterochelys radiata*
Germany (West Berlin) 1977; Malagasy 1979. There are two tortoises on the Malagasy stamp; which is labelled "Testudo radiata." The smaller tortoise depicted is probably *Pyxis arachnoides*.


*Asterochelys radiata*


*Asterochelys yinphora*

*Asterochelys yhiphora*
Malagasy 1987; Jersey 1988.

*Carettochelys insculpta*
Papua-New Guinea 1972, 1975.


*Carettochelys insculpta*

*Chelodina longicollis*
Australia 1982, 1984.

*Chersina angulata*
South West Africa 1982.


*Chelodina longicollis*


*Chersine angulata*

*Chrysemys decussata* - See *Trachemys decussata*

*Chrysemys scripta* - See *Trachemys scripta*

*Chrysemys picta*
USA 1984.


*Chelonoides carbonaria*

*Chelonoidis carbonaria*
Barbuda 1975, 1987; Montserrat 1972; Grenadines of St. Vincent 1979; Antigua & Barbuda 1987; Bermuda 1987; Barbados 1989; Panama 1990; Venezuela 1992.

*Chelonoidis denticulata*

Grenada 1968, 1974; Grenadines of Grenada 1974, 1986. Although the stamps are endorsed with the scientific name *C. denticulata*, only *C. carbonaria* (a closely related species) occurs in Grenada and the Grenadines.

*Chelonoidis elephantopus*

Ecuador 1938 (2), 1957, 1961, 1973, 1974, 1986; Great Britain 1982; Equatorial Guinea 1977 (miniature sheet); Tanzania 1993.

*Clemmys guttata*

Dhufar 1972. In a miniature sheet with 7 other reptile species.

*Cistoclemmys flavomarginata*

Ryukyu, 1965 (this species on this stamp is labelled the "Semaruhakogame turtle", but the picture fits the description of *C. flavomarginata*); Malagasy 1975.

*Cyclemys aavonmarginata* - see *Cistoclemmys flavomarginata*.

*Cuora trifasciata*

Vietnam, South 1989.

*Dermatemys mawii*

Belize 1990 (incorrectly spelled *mawi* on stamp).


*Emys orbicularis*

*Emys orbicularis*

Yugoslavia 1962; Poland 1963; East Germany 1963; Albania 1966; Liechtenstein 1976; Hungary 1986, 1989; Lithuania 1993.

*Geochelone carbonaria* - See *Chelonoidis carbonaria*

*Geochelone elephantopus* - See *Chelonoidis elephantopus*

*Geochelone elegans*

Maldives Isls 1973 (2); Guinea 1977; Vietnam 1989.

*Geochelone gigantea* - See *Aldabrachelys elephantina*


*Geochelone elegans*

*Geochelone pardalis*





Botswana 1980; South West Africa 1982; Tanzania 1987; Zambia 1984 (miniature sheet).

*Geochelone radiata* - See *Asterochelys*

*Geochelone sulcata*

Mali 1976; Benin 1977; Libya 1979; Cameroun 1981.

*Geochelone yhiphora* - See *Asterochelys*.


*Geochelone pardalis*

*Geoemyda spengeleri*

Ryukyu Isls 1966; Japan 1976.

*Gopherus polyphemus*

Nigeria 1986. Although this species is depicted with three African reptiles, and the theme is "African Reptiles", it is a North American species.

*Homopus signatus*

South West Africa 1982.

*Indotestudo elongata*

North Vietnam 1966.


*Geomyda spengeleri*

*Kinixys erosa*

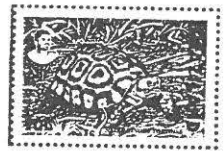
Togo 1964; Burkina Faso 1985, 1989; Ghana 1992.

*Kinixys natalensis*

Swaziland 1992.

*Kinosternum scorpioides*

Paraguay, 1975.



*Kinixys natalensis*

*Malaclemys terrapin*

Laos 1984. Although the species is the only North American one depicted in a set of five stamps showing non-American reptiles, the scientific name is on the stamp, and the illustration is of the species.

*Malacochersus tornieri*

Kenya 1977; Tanzania 1977; Uganda 1977; Tanzania 1993.

*Mauremys caspica*
Ajman 1964 (2), 1965 (2), 1967 (2). There is some question as to the correct identification of the animal on this stamp; however *M. caspica* is the only tortoise species found in Ajman; Cyprus 1992.

*Pelodiscus sinensis*
N. Vietnam 1966.

*Pelusios subniger*
Seychelles Outer Islands 1983.

*Malacochersus torneiri*

*Pelusios* sp.
Congo Republic 1982 (2).

*Platysternon megacephalum*

*Platemys platycephala*
Surinam 1982.

*Platysternon megacephalum*
N. Vietnam 1975, S. Vietnam 1989.

*Podocnemis expansa*
Venezuela 1982, 1992; Brazil 1979.

*Pelodiscus sinensis*

*Psammobates oculifer*
South West Africa 1982.

*Psammobates geometricus*
South Africa 1993.

*Psammobates oculifer*

*Pseudemys decussata* - See *Trachemys decussata*

*Pseudemys scripta* - See *Trachemys scripta*

*Pseudemys stejnegeri granti* - See *Trachemys decussata*

*Pyxis arachnoides*
Malagasy 1979 (See notes under *Asterochelys radiata*).





*Rhinoclemys punctularia*
Surinam 1982.

*Staurotypus triporcatus*
Belize 1990

*Staurotypus triporcatus*

"Terrapin"
Kampuchea 1983

*Terrapene carolina*
USA 1987, Kampuchea 1988.

*Terrapene carolina*

*Testudo denticulata* - See *Chelonoides denticulata*

*Testudo elegans* - See *Geochelone*

*Testudo elongata* - See *Indotestudo elongata*

*Testudo elephantopus* - See *Chelonoides*

*Testudo gigantea* - See *Aldabrachelys elephantina*

*Testudo graeca*

*Testudo hermanni*
France 1991; Monaco 1991; Rumania 1960 (called *T. graeca ibera* on the stamp).

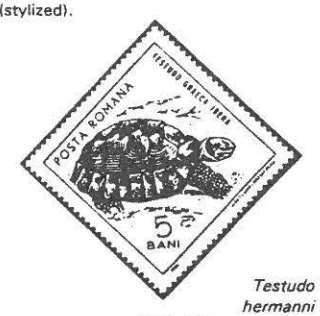
*Testudo graeca*
Rumania 1965; Albania 1966; Spain 1974; Tunisia 1989 (stylized).

*Testudo horsfieldi* - See *Agrionemys*

*Testudo radiata* - See *Asterochelys*

*Testudo sulcata* - See *Geochelone*

*Trachemys decussata*
Cayman Island 1971, 1981; Cuba 1982, 1983.



*Testudo hermanni*
(Called *T. gracea ibera* on stamp)

*Trachemys scripta*

Colombia 1987; Belize 1990; Panama 1990

*Trionyx* sp. - See *Aspideretes*

Kampuchea 1983.

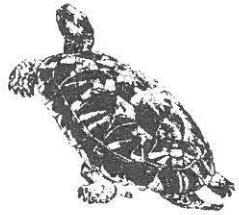
*Trionyx spinifera* - See *Apalone spinifera*

*Trionyx triunguis*

*Trionyx sinensis* - See *Pelodiscus sinensis*

*Trionyx triunguis*

Belgium 1965; Congo Republic 1982; Sierra Leone 1982 - was called *T. ferox*.







# ATLAS OF FROG DISTRIBUTION IN THE FREE STATE, SOUTH AFRICA

**M.F. Bates**

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

## INTRODUCTION

Prior to Poynton's (1964) authoritative work on southern African amphibians, distribution records for frogs and toads from the Free State province of South Africa were published by Hewitt & Power (1913), Hoffman (1939, 1942), Inger (1959) and Van Dijk (1971). Poynton (1964) recorded 17 taxa (species and subspecies) from the Free State, but after surveying several additional localities distributed throughout the province, De Waal (1980) recorded a total of 22 taxa. After 1980, a small number of additional distribution records were published by Parry (1982), Drewes (1985), Van Wyk (1985), Bates (1988, 1991a), Lambiris (1989, 1991) and Bates & Douglas (1991).

During a study on the biogeographical patterning of amphibians and reptiles in the Free State, Bates (1992a) examined virtually all available Free State specimens in southern African museums and private collections. Several new localities were reported and these, together with additional localities and literature records not mentioned by De Waal (1980), were recorded by Bates (1995). Four taxa new to the Free State were recorded by Bates (1995), namely: *Heleophryne natalensis, Bufo gariepensis nubicolus, Breviceps v. verrucosus* and *Tomopterna natalensis*. This brings the total number of amphibian species and subspecies known from the Free State to 26.

The aim of this paper is to provide updated distribution maps for all amphibian taxa in the Free State using records published in the above-mentioned papers. Errors made by De Waal (1980) in the spelling of farm names, plotting of localities *etc.* are noted.

## MATERIALS AND METHODS

As far as was possible, all available specimens of Free State amphibians in southern African museums were examined by Bates (1992a, 1995). This includes virtually all specimens (localities checked against De Waal's lists) collected during De Waal's (1980) survey (in the collection of the National Museum, Bloemfontein). In some cases, specimens catalogued by De Waal (1980) were not found, but these usually formed part of a series of specimens from the same locality. However, in two cases, no specimens from a particular locality were available for examination: *Bufo rangeri* (Deelfontein, 2726Ba1; Nova, 2927Ab1).

Before producing distribution maps (Figs 1-21) the correct eighth-degree locus codes (see usage in De Waal, 1978; Bates, 1992b) for all new localities were carefully checked using the index of Orange Free State farms (Surveyor General, 1970) together with the relevant 1 : 50 000 maps. Each farm name, number, administrative district and quarter-degree unit code in De Waal's (1980) gazetteer was also checked against the farm

index. Although De Waal's (1980) localities were plotted using the eighth-degree grid and locus code method only the correct quarter-degree positions could be determined from the farm index. Determination of eighth-degree units would require exhaustive and time-consuming examination of 1 : 50 000 maps, and as the quarter-degree unit is generally considered fine enough for biogeographical purposes, only localities found to be incorrectly listed (*e.g.* erroneous locus codes) in De Waal's (1980) gazetteer were also checked on 1 : 50 000 maps to determine eighth-degree codes.

Using the corrected gazetteer, all localities listed by De Waal (1980) for each taxon were re-plotted on maps using the eighth-degree grid and locus code method and errors noted.

In most cases only the following symbols were used on maps (Figs 1-21):

i) A solid circle for localities previously reported in the literature, represented by material examined personally.

ii) A hollow circle for localities previously reported in the literature, represented by material not examined personally.

iii) A solid triangle for new records (see Bates, 1995), represented by material examined personally.

iv) A hollow triangle for a single sight record (*Xenopus l. laevis*, 2828Db1).

## AMENDMENTS AND CORRECTIONS TO PUBLISHED DISTRIBUTION DATA

The written form or spelling of the following farm names in De Waal's (1980) gazetteer should be corrected as indicated in parentheses (*i.e.* according to that given in the index and printed on the relevant 1 : 50 000 map): Alwyn (Alwyn Kop); Annies-Rust (Annie's-Rust); Bramley's Hoek (Bramleys Hoek); Doornland (Doorn Land); Exelsior (Excelsior); Groenekloof (Groene Kloof); Lange hoek (Lange Hoek); Luiperfontein (Luiper Fontein); Mara, Vredefort district (Mara B, Vredefort district); Over (Oever); Plaatjieskraal (Plaatjesfontein); Thaba Pachoa Berg (Thaba Patchoa Berg); Tygerfontein (Tyger Fontein); Van der Walt's Rust (Van der Walts Rust).

The written form or spelling of the following farm names differs in the following way: Bachelor's Home - De Waal, 1980 and on 1 : 50 000 map (Bachelors Home - in index); Kromhof - De Waal, 1980 and on 1 : 50 000 map (Krom Hof - in index); Vergaderrand (De Waal, 1980), Vergder-Rand (on 1 : 50 000 map), Vergader Rand (in index).

In a few instances the index gives quarter-degree references that are different from those listed in De Waal's (1980) gazetteer. However, examination of 1 : 50 000 maps on which parts of a particular farm are situated showed that for the farms Bachelors Home, Bethel, Doorn Land, Sophiasdal and Zomerviakte, most of the farm's area is indeed situated in the eighth-degree given by De Waal (1980). For the farm Bergkraal, the index refers to quarter-degree unit 2926Aa, but the entire farm is situated in unit 2926Ab2, as given by De Waal (1980). However, in the case of the farm Veepost, De Waal (1980) refers to 2826Cd3, while the index refers to 2925Bb; examination of the 1 : 50 000 map indicates that the major part of the farm's area is in fact situated in 2925Bb4. The index gives an incorrect reference (*i.e.* 2827Bb) for the farm Bethel (6), Senekal district; examination of 1 : 50 000 maps indicated that most of the farm's area lies in unit 2827Ba3 (about a third is in unit 2827Ba4), as given by De Waal (1980).

De Waal (1980) listed Poynton's (1964) "Van Reenen" (2829Ad2) record for *Bufo rangeri*, but did not list it in his gazetteer. There is also a specimen (NMB A219) of *B. rangeri* in the National Museum's collection from Van Reenens Pass (2829Ad4), but both the above localities are situated just within the borders of KwaZulu-Natal, and are not plotted on the maps presented below. De Waal (1980) lists the localities "Rietfontein; Rouxville" for *Bufo g. gariepensis*, but this should be presented as Rietfontein, Rouxville (*i.e.* the farm Rietfontein no. 9 in the district of Rouxville); he also gave "Waterbron" as a locality for *Tomopterna cryptotis*, but failed to list it in his gazetteer. This locality is referable to the farm Waterbron (2576), Bloemfontein district (2926Aa1).





De Waal (1980) recorded various species from the localities "Thaba 'Nchu" (2926Bb3) and "Thaba Patchoa Berg" (2927Ac1). However, with the exception of five *Cacosternum boettgeri* specimens (NMB A76-80) actually collected on the farm Thaba Patchoa Berg during his survey, the old National Museum Vertebrate Catalogue indicates that virtually all other records are of specimens collected by A.C. Hoffman during the late 1930s on Thaba 'Nchu Mountain (not the town) or Thaba Phatshwa Mountain (not necessarily the farm Thaba Patchoa Berg). Examination of 1 : 50 000 maps indicates that most of Thaba 'Nchu Mountain is situated in eighth-degree unit 2926Bd2 (including the summit), not 2926Bb3, and this has been corrected on the maps. However, Poynton (1964) recorded *Bufo g. gariepensis, Pyxicephalus adspersus* and *Tomopterna cryptotis* from "Thaba 'Nchu" based on material in the collections of other museums, and for these species, the town of Thaba 'Nchu (2926Bb3) is accepted as a locality record and plotted as such. Also, although De Waal (1980) gives "Thaba 'Nchu" as a locality for *Bufo rangeri* and *Pyxicephalus adspersus*, there are specimens only from "Manaro Gardens, Thaba 'Nchu" (also 2926Bb3) in the National Museum collection.

The following additional corrections were made to the maps (Figs. 1-21) presented below:

*Bufo gariepensis gariepensis*: The locality Sentinel (Witzieshoek), Harrismith district (2828Db4) is referable only to a specimen of *B. g. nubicolus* (see Bates, 1995).

*Bufo gutturalis*: De Waal (1980) listed the farm Middenspruit (151), Kroonstad district (2727Ca2) but did not plot it on his map. Two eighth-degree units (2727Da2, 2727Dd1) plotted by De Waal (1980) do not correspond with any listed locality names and should therefore be deleted from the map.

*Tomopterna cryptotis*: De Waal (1980) plotted a record in eighth-degree 2826Dc4, but this does not correspond with any listed locality name and should therefore be deleted from the map. The following localities listed by De Waal (1980) were not plotted on his map: Excelsior (2926Cc3), Holme's Dale (2826Cc4) and Zoetbron (2729Aa4).

*Rana fuscigula*: Goedgenoeg (2827Ac3) was given as a locality by De Waal (1980), but no specimens from this locality were found in the National Museum's wet collection or catalogues and the locality is therefore not plotted on the map.

*Strongylopus grayii grayii*: The locality Morgenzon (123), Senekal district was erroneously plotted in eighth-degree unit 2828Ca1 by De Waal (1980), even though his gazetteer gives the correct unit, namely 2827Db1 (about half the farm's area is situated in 2827Db2).

*Phrynobatrachus natalensis*: The locality Klipplaat (380), Vrede district was plotted in eighth-degree unit 2728Bd1 by De Waal (1980), but as about 95% of the farm's area is situated in unit 2728Bd4, the latter is considered more correct.

*Kassina senegalensis*: De Waal (1980) plotted a record in eighth-degree unit 2826Cd3, but this does not correspond with a listed locality name and should be deleted from the map. De Waal (1980) listed the farm Veepost (2925Bb4) as a locality, but did not plot it on his map.

*Semnodactylus wealii*: The locality Fouriesburg was erroneously plotted in eighth-degree unit 2828Ca3 by De Waal (1980), even though his gazetteer gives the correct unit, namely 2828Ca2.

## DISCUSSION

A total of 26 species and subspecies of frogs and toads have been recorded from the Free State province of South Africa. The distributions of these taxa in the province have been plotted on maps using the eighth-degree grid and locus code method.

The number of plotting errors found on De Waal's (1980) maps highlights the fact that, from the point of view of accuracy, it is far more satisfactory to re-plot maps than to re-copy them.

The number of species and subspecies recorded from each quarter-degree unit in the Free State and peripheral areas on the Northern Cape/Free State border (*i.e.* 2824Bd3, 2824Db3, 2824Dc3, 2924Ba1, 2924Cd3) was determined using distribution records in Poynton (1964), Branch (1990) and Bates (1991b) for the Northern Cape province, and De Waal (1980) and Bates (1995) for the Free State (see Figs 1-21). Collections of amphibians have been made in 162 (71%) of the 229 quarter-degree units falling within the Free State (even if only peripherally, judging from grids on the maps). Quarter-degree unit 2829Ac has 13 taxa recorded, while 12 taxa have been recorded from 2828Da and 11 taxa from 2927Ab, these areas thus having the highest recorded amphibian diversity in the province (Fig. 22). Nineteen quarter-degree units (8% of total) have seven (7/13, *i.e.* a little more than 50% that of the highest diversity unit) or more taxa recorded, but these units are generally scattered throughout the region, while 170 units (74% of total) have only three or less taxa recorded, suggesting that the area has not been uniformly sampled.

## ACKNOWLEDGEMENTS

I wish to thank Prof. D.E. van Dijk who suggested that I check and re-plot De Waal's records rather than re-copy them onto the maps presented above; and Mr E. Mohape (National Museum, Bloemfontein) for sorting specimens for examination.

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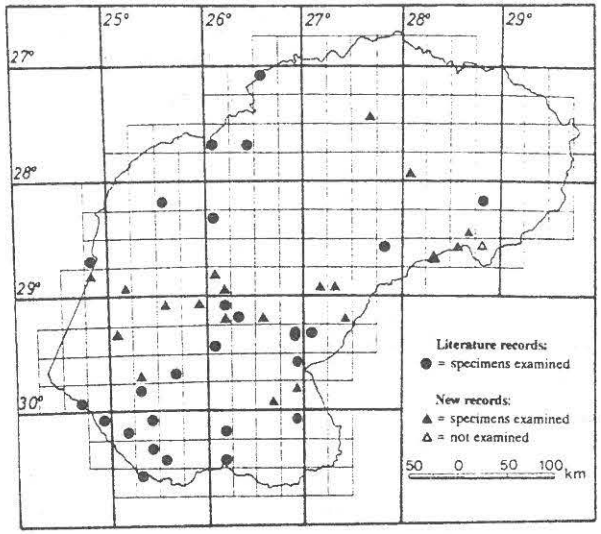



**Figure 1:** Distribution of *Xenopus laevis laevis* in the Free State and peripheral areas in the Northern Cape province.

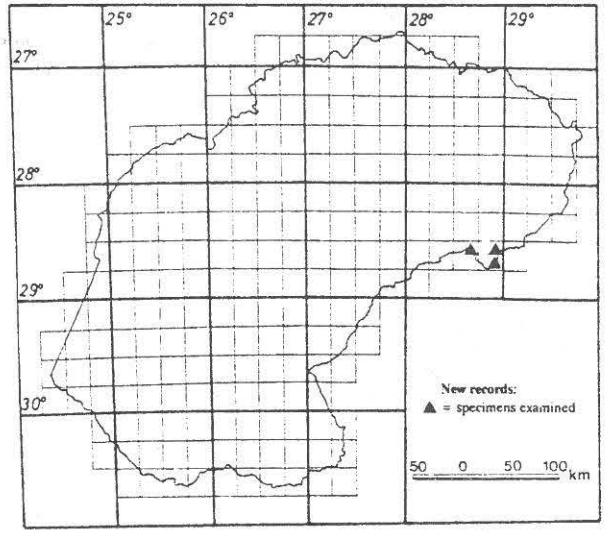



**Figure 2:** Distribution of *Heleophryne natalensis* in the Free State.





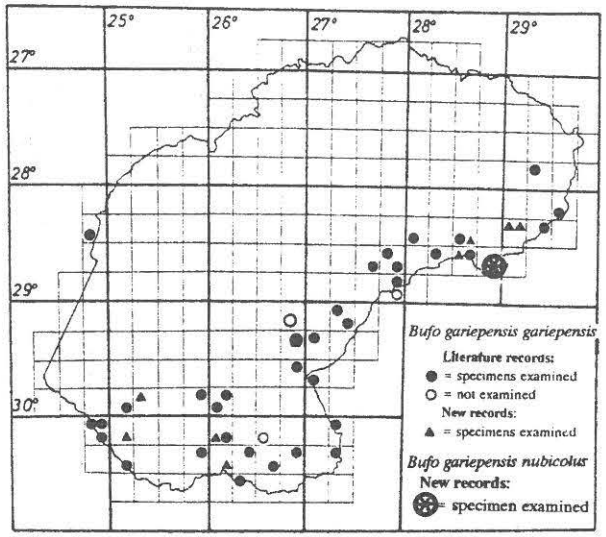



**Figure 3:** Distribution of *Bufo gariepensis gariepensis* and *Bufo gariepensis nubicolus* in the Free State and peripheral areas in the Northern Cape province.

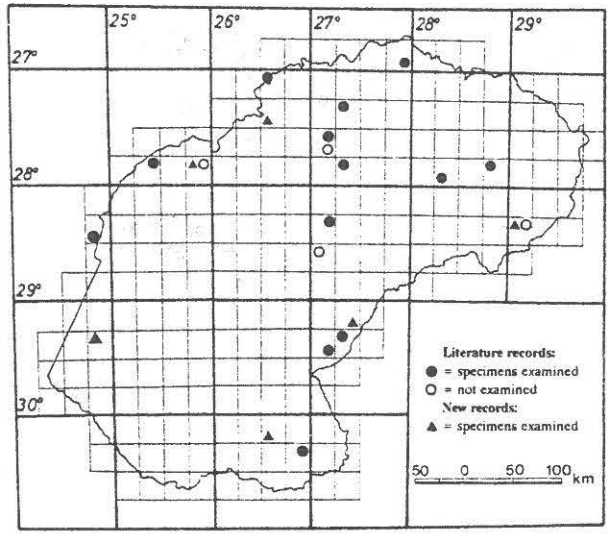



**Figure 4:** Distribution of *Bufo gutturalis* in the Free State and peripheral areas in the Northern Cape province.

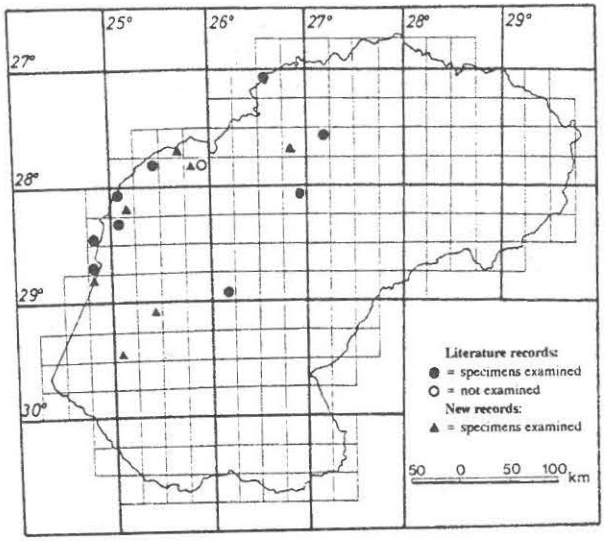



**Figure 5:** Distribution of *Bufo poweri* in the Free State and peripheral areas in the Northern Cape province.

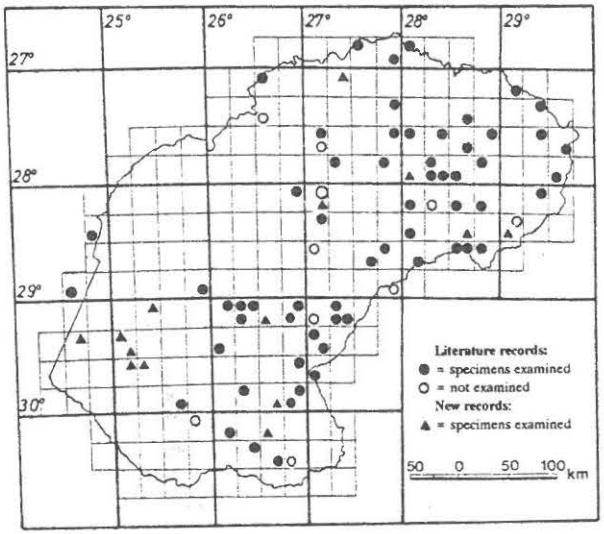



**Figure 6:** Distribution of *Bufo rangeri* in the Free State and peripheral areas in the Northern Cape province.





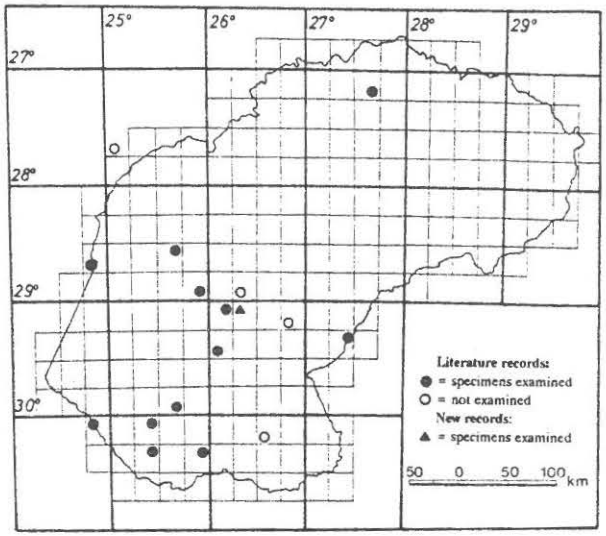



**Figure 7:** Distribution of *Bufo vertebralis* in the Free State and peripheral areas in the Northern Cape, North-West province and Lesotho.

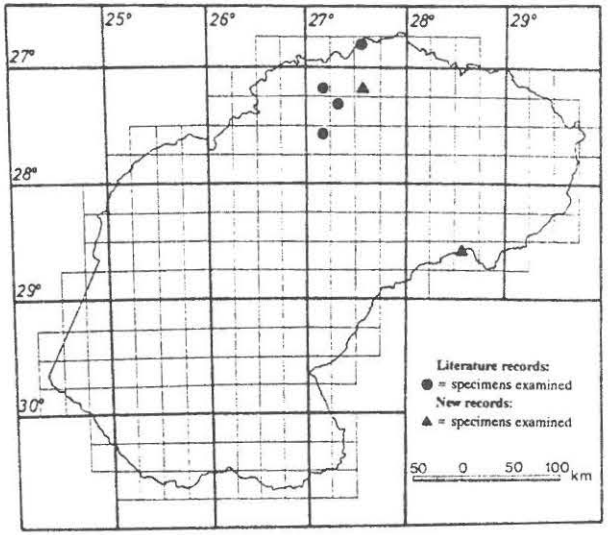



**Figure 8:** Distribution of *Schismaderma carens* in the Free State.

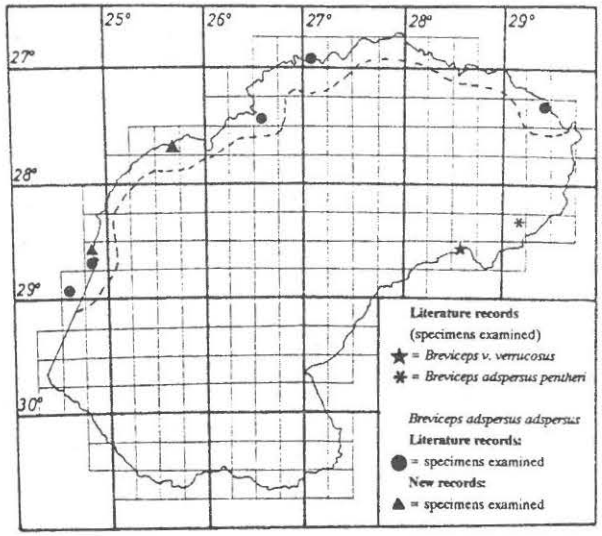



**Figure 9:** Distribution of *Breviceps verrucosus verrucosus, B. a. adspersus* and *B. a. pentheri* in the Free State and peripheral areas in the Northern Cape province.

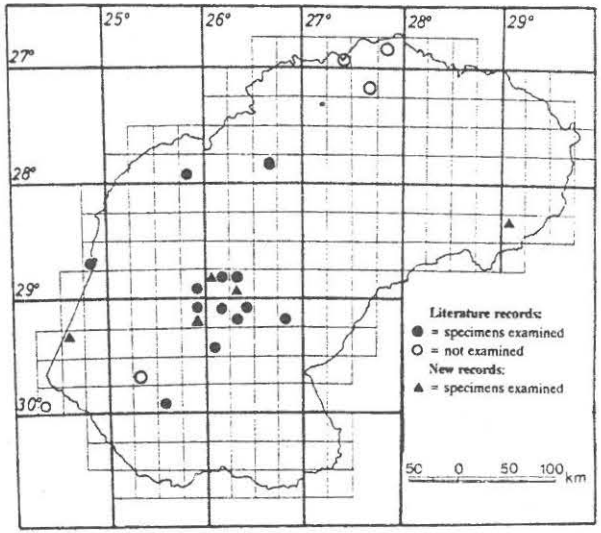



**Figure 10:** Distribution of *Pyxicephalus adspersus* in the Free State and peripheral areas in the Northern Cape province.





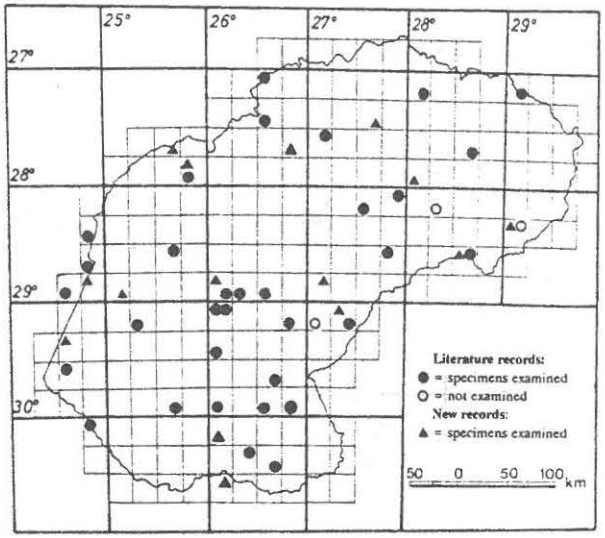



**Figure 11:** Distribution of *Tomopterna cryptotis* in the Free State and peripheral areas in the Northern Cape province.

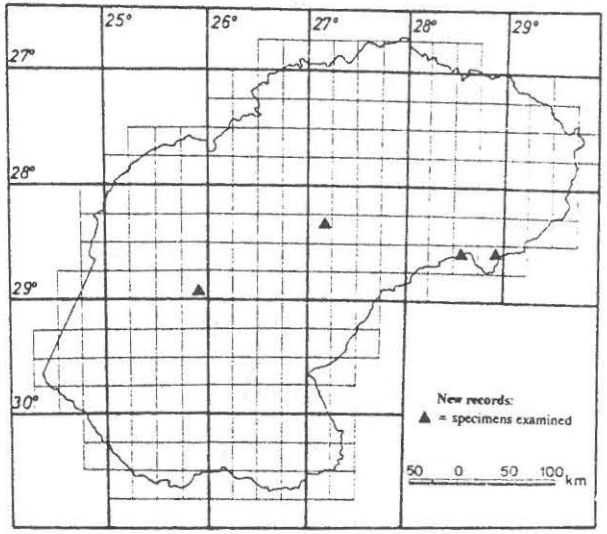



**Figure 12:** Distribution of *Tomopterna natalensis* in the Free State.

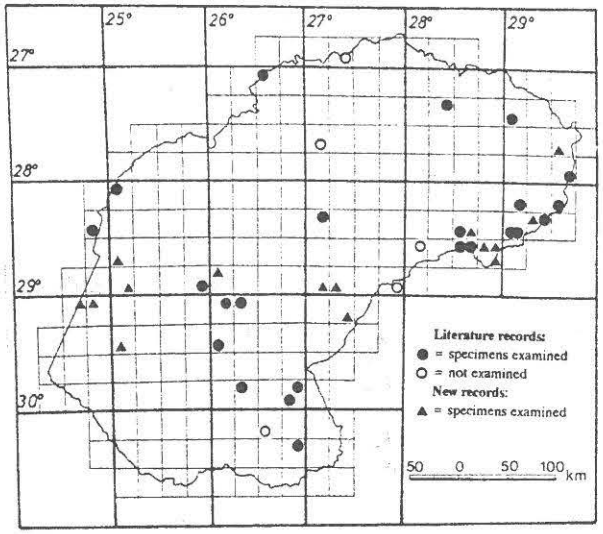



**Figure 13:** Distribution of *Rana angolensis* in the Free State and peripheral areas in the Northern Cape province.

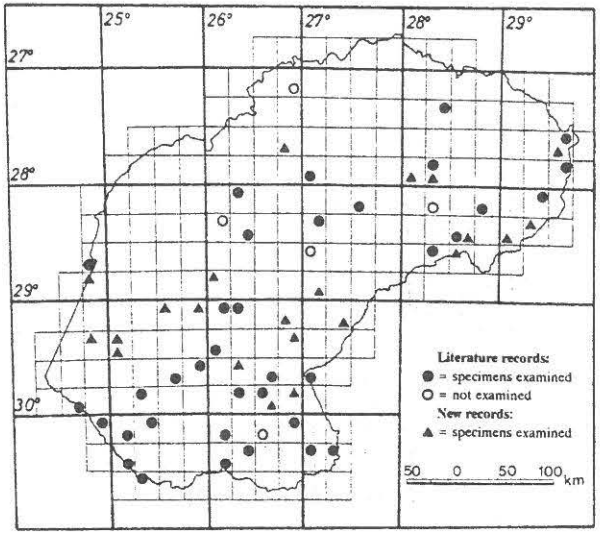



**Figure 14:** Distribution of *Rana fuscigula* in the Free State and peripheral areas in the Northern Cape province.





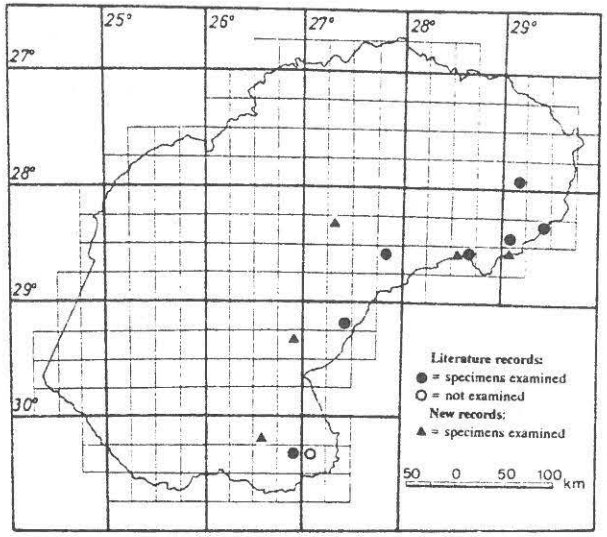



**Figure 15:** Distribution of *Strongylopus grayii grayii* in the Free State.

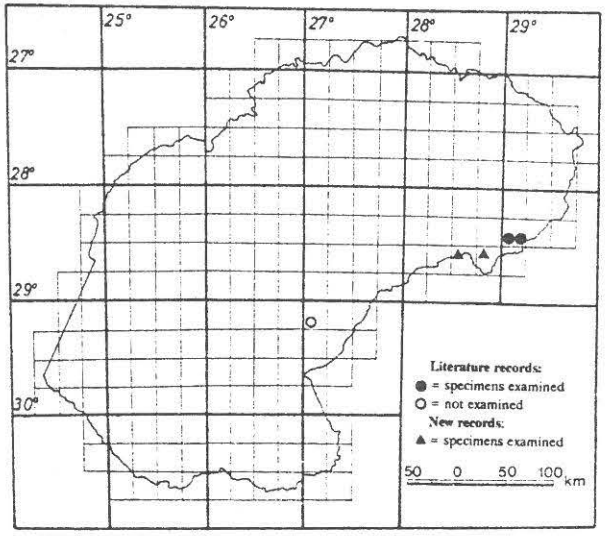



**Figure 16:** Distribution of *Strongylopus fasciatus fasciatus* in the Free State.

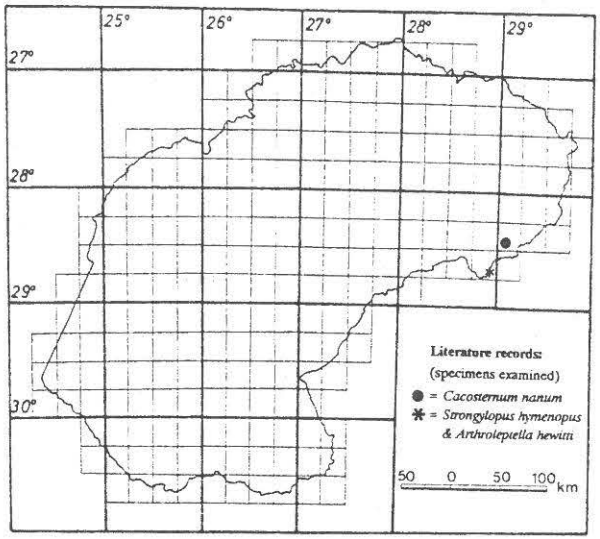



**Figure 17:** Distribution of *Strongylopus hymenopus, Cacosternum nanum* and *Arthroleptella hewitti* in the Free State.

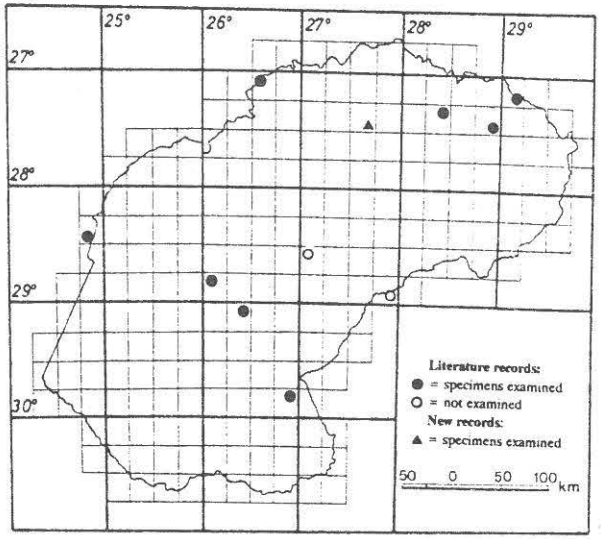



**Figure 18:** Distribution of *Phrynobatrachus natalensis* in the Free State and peripheral areas in the Northern Cape province.





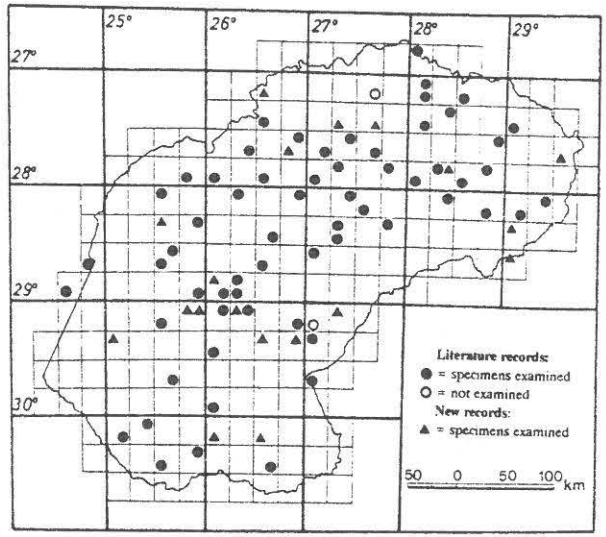



**Figure 19:** Distribution of *Cacosternum boettgeri* in the Free State and peripheral areas in the Northern Cape province.

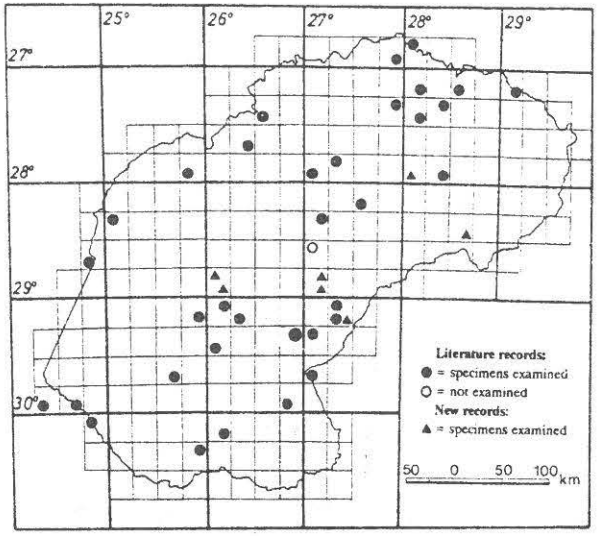



**Figure 20:** Distribution of *Kassina senegalensis* in the Free State and peripheral areas in the Northern Cape province.

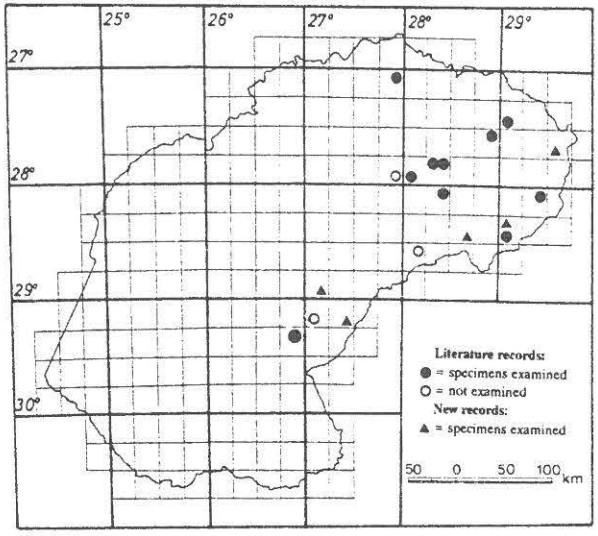



**Figure 21:** Distribution of *Semnodactylus wealii* in the Free State.





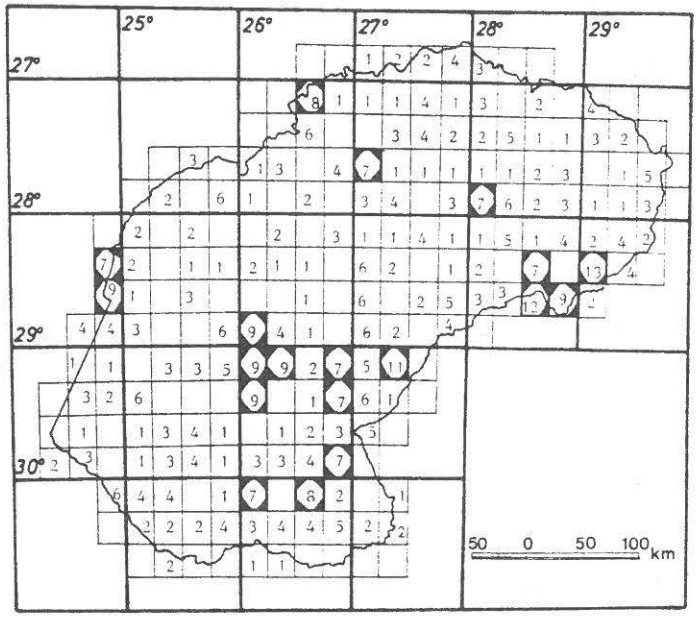



**Figure 22:** Numbers of amphibian species and subspecies recorded per quarter-degree unit in the Free State, including peripheral areas (quarter-degree units 2824Bd, Db, Dc, 2924Ba, Cd) in the Northern Cape province (see Figs 1-21). Units from which seven or more taxa have been recorded have bold borders.

# DISTRIBUTION AND BIODIVERSITY MAPPING

**R.B. Yeadon**

*5 Armadale Road, Sea View 4094, South Africa*

During a visit to Zimbabwe several years ago, I popped into the Bulawayo Museum to visit Don Broadley. I found him filling in collection locality grid units on a large transparency map of Zimbabwe. As it was a distribution map of the Common River Frog (*Rana angolensis*), there was a lot of filling in to do! Although I did not realise it at the time, the seed of an idea had been planted in my mind. In hindsight I now realise that I could have written a computer program then to assist Don in the production of distribution maps. At the time though, the Bulawayo Museum did not have a computer, and therefore any such program would not have been of much personal use to Don, although others may have found it useful.

Now that computers are more freely available, computer assisted distribution maps are practical. I believe that there is a computer program called GIS which can produce distribution maps, but I have yet to see any results. Thanks to Durban Museum's retired butterfly man who needs to create 400 distribution maps for a forthcoming book, I have been pushed into writing a computer program to help with the job. What I have come up with seems to work quite well. The only problem at present is that it is difficult to obtain accurate blank maps onto which the computer must print the black dots, and photocopiers all seem to slightly distort what they copy. I should be able to sort out this small problem and then we will be 'in production'.

From the distribution map print program it was a small step to create what I think is a first (at least I have never seen it done by computer before) biodiversity map. Each grid unit is printed with a dot, the size of which represents the number of different species collected in that grid unit. The map reproduced here shows the diversity of amphibians and reptiles of KwaZulu-Natal in the Durban Museum collection. One must not lose sight of the fact that this refers only to the DM collection. Only when all collections have been included and previously uncollected areas visited, will the map be meaningful as far as true diversity is concerned. At present it merely indicates where we must concentrate our collecting in future. I would like to do a biodiversity map of the Free State province when time permits, as the area has been well covered thanks to Dr S.W.P. de Waal.

I would welcome any enquiries about these two map-printing systems.

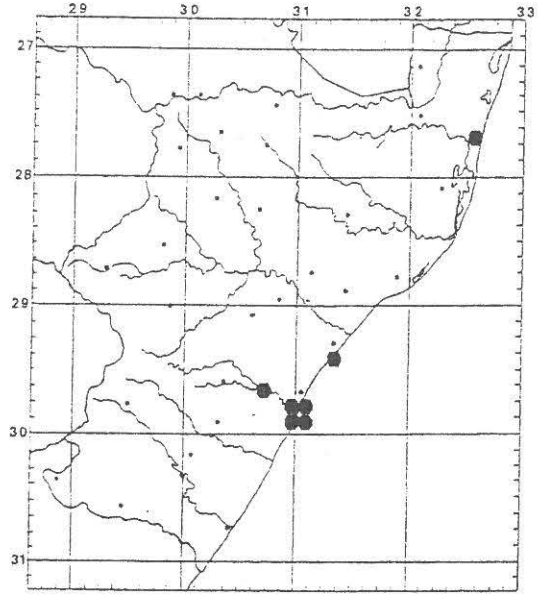




Partial List of Raw Data used by
Computer generation of
Collection Distribution Maps

| TAXON_NAME | LATITUDE | LONGITUDE |
|---|---|---|
| Breviceps adspersus adspersus | 295126 | 310127 |
| Breviceps adspersus adspersus | 295126 | 310127 |
| Breviceps adspersus adspersus | 294851 | 310105 |
| Breviceps adspersus adspersus | 292330 | 312006 |
| Breviceps adspersus adspersus | 295420 | 310140 |
| Breviceps adspersus adspersus | 295420 | 310140 |
| Breviceps adspersus adspersus | 274311 | 323302 |
| Breviceps adspersus adspersus | 274311 | 323302 |
| Breviceps adspersus adspersus | 294423 | 303957 |
| Breviceps adspersus adspersus | 295218 | 305925 |
| Breviceps adspersus adspersus | 295302 | 305934 |

Example of Computer generated
Collection Distribution Map

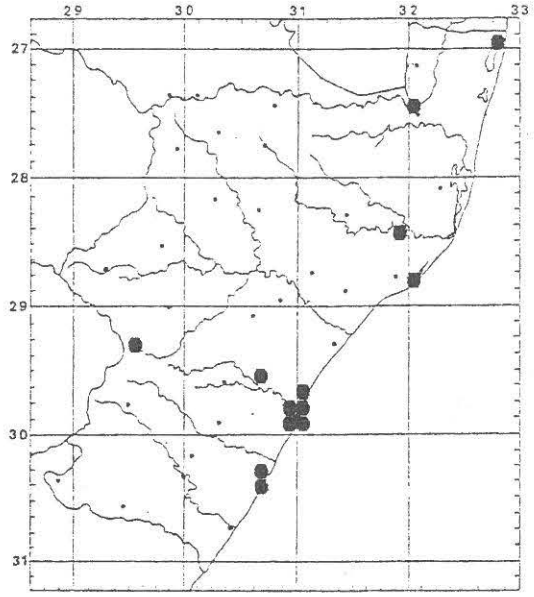



Breviceps adspersus adspersus

Partial List of Raw Data used by
Computer generation of
Collection Distribution Maps

| TAXON_NAME | LATITUDE | LONGITUDE |
|---|---|---|
| Lygodactylus capensis capensis | 291612 | 293104 |
| Lygodactylus capensis capensis | 291612 | 293104 |
| Lygodactylus capensis capensis | 291612 | 293104 |
| Lygodactylus capensis capensis | 295113 | 305904 |
| Lygodactylus capensis capensis | 240400 | 344428 |
| Lygodactylus capensis capensis | 265726 | 324935 |
| Lygodactylus capensis capensis | 265726 | 324935 |
| Lygodactylus capensis capensis | 272548 | 320405 |
| Lygodactylus capensis capensis | 260016 | 325454 |
| Lygodactylus capensis capensis | 282553 | 315714 |
| Lygodactylus capensis capensis | 181127 | 285448 |

Example of Computer generated
Collection Distribution Map

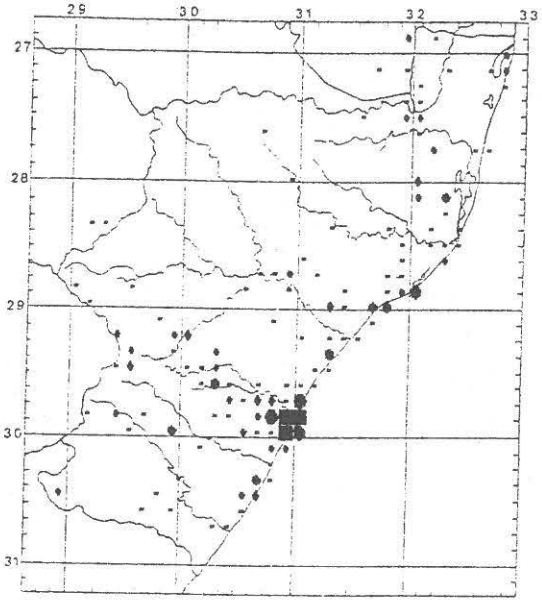



Lygodactylus capensis capensis





Example of Computer generated
Collection Biodiversity Map




Durban Museum.
Reptiles and Amphibians.
Collection Grid Units Biodiversity.

· = 1 - 4 species from grid unit.
• = 5 - 8 species from grid unit.
• = 9 - 12 species from grid unit.
• = 13 - 16 species from grid unit.
• = 17 - 20 species from grid unit.
• = 21 - 24 species from grid unit.
• = 25 - 28 species from grid unit.
• = 29 - 32 species from grid unit.
• = 33 - 36 species from grid unit.
• = 37 - 40 species from grid unit.
• = 41 - 44 species from grid unit.
■ = 45 + species from grid unit.

# INCUBATION OF LEOPARD TORTOISE *GEOCHELONE PARDALIS* EGGS UNDER NATURAL CONDITIONS

**H. Jauch**

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*Geochelone pardalis* occurs throughout Namibia, with the exception of the Namib desert (Branch, 1988). It adapts readily to captive conditions and has been bred on many occasions. Females lay up to six clutches of 6-15 eggs during summer, and hatchlings usually emerge after the first rains, 10-15 months later (Branch, 1988).

During 1991 and 1992 I established a breeding group of 10 *G. pardalis*, collected in the Windhoek area. The tortoises were kept in a garden of about 600 $m^2$ where they fed on natural vegetation as well as lettuce, vegetables and fruit. Mating occurred regularly between September and December 1992, and females deposited several clutches between December 1992 and February 1993.

One of the largest females laid a clutch of 13 eggs on 21 December 1992. After excavating a 25-cm-deep-hole, she deposited her clutch and refilled the hole. A thermocouple was inserted between the eggs to allow for the monitoring of incubation temperatures. Temperature readings were taken every second day with a Sensortek Bailey Bat thermocouple.

The highest temperatures (21,2 - 37,2°C) were registered between 19h00 and 20h00, while the lowest temperatures (16,4 - 30,6°C) were reached between 10h00 and 11h00. Table 1 shows the minimum and maximum temperatures for each month during the incubation period (December 1992 - December 1993).

On 1 January 1994 two hatchlings emerged, and 12 days later, all remaining eggs had hatched. The incubation period thus ranged from 376 to 388 days. Hatching coincided with the arrival of heavy rains in early January 1994.

Temperatures during the winter of 1993 were exceptionally mild (16,4 - 26,3°C), which may account for the relatively short incubation period. In harsh winters, soil temperatures are several degrees colder, prolonging incubation. Branch (1988) noted that *G. pardalis* eggs hatch after eight months if incubated at a constant temperature of 28°C. This is supported by the data obtained under natural conditions during this study. Table 2 shows the average incubation temperatures between December 1992 and December 1993.

For six months of the incubation period (December 1992, January, February, September, November and December 1993) average incubation temperature was 28°C or higher. In March and October it was about 26°C. Only from April to August did the average temperature drop to below 25°C. This suggests that hardly any egg development occurs below 25°C, otherwise the first hatchlings should have emerged during the early rains of October 1993. The rains presumably soften the soil sufficiently to allow hatchlings to burrow out of the soil.





**Table 1:** Minimum and maximum incubation temperatures for a clutch of 13 *Geochelone pardalis* eggs under natural conditions.

| Month | D '92 | J | F | M | A | M | J | J | A | S | O | N | D '93 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Temp. | | | | | | | | | | | | | |
| (Min) °C | 23,0 | 21,8 | 22,1 | 20,9 | 18,5 | 19,7 | 16,4 | 17,1 | 17,8 | 24,2 | 18,2 | 20,6 | 23,8 |
| (Max)°C | 37,0 | 37,0 | 34,4 | 29,7 | 30,7 | 27,9 | 24,2 | 24,0 | 26,3 | 31,8 | 34,6 | 36,4 | 37,2 |

**Table 2:** Average incubation temperatures for a clutch of 13 *Geochelone pardalis* eggs under natural conditions.

| Month | D '92 | J | F | M | A | M | J | J | A | S | O | N | D '93 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Average incubation temp | 30,0 | 29,4 | 28,2 | 25,3 | 24,6 | 23,8 | 20,3 | 20,5 | 22,0 | 28,0 | 26,4 | 28,5 | 30,5 |

## ACKNOWLEDGEMENTS

I wish to thank Prof. Neil Heideman (University of Namibia, Windhoek) for commenting on the manuscript. I am also grateful to the Ministry of Environment and Tourism for granting the necessary permits.

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# DATE OF DESCRIPTION OF *HELEOPHRYNE* AND CERTAIN OTHER TAXA DESCRIBED BY W.L. SCLATER

**W.R. Branch**

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*P.O. Box 13147, Humewood 6013, South Africa*

In the first issue of the *Annals* of the South African Museum, W.L. Sclater, Director of the institution from 1896 to 1906, published a 'List of the Reptiles and Batrachians of South Africa, with descriptions of new species'. This included the description of the snake *Grayia lubrica* (subsequently placed in the synonymy of *Lycodonomorphus laevissimus*), the gecko *Elasmodactylus namaquensis* (transferred to *Pachydactylus*) and a new genus and species of ghost frog, *Heleophryne purcelli*.

There is confusion in the literature concerning the date of Sclater's descriptions. Reprints of Sclater's article are dated 1898, whilst bound copies of the volume are usually dated 1899, following the date noted on the front cover. However, a note within the bound volume shows the date of issue of part one was June 1898, with subsequent parts appearing in March 1899 and December 1899. Sclater's descriptions (pp. 95-111, 1 pl) appeared in the first issue and should therefore be dated 1898.

Modern references to *Grayia lubrica* (Broadley, 1983; Raw, 1973; Haagner & Branch, 1994) give the date as 1898, following the correct assignment in Loveridge (1958). In discussion of *Pachydactylus namaquensis*, Loveridge (1947) again correctly recorded the date as 1898, but earlier on, both Methuen & Hewitt (1914) and FitzSimons (1943) incorrectly gave the date of description as 1899. The most persistent, and perhaps most serious, confusion relates to the frog genus *Heleophryne* and the species *H. purcelli*. Neither FitzSimons (1946) nor Hewitt (1909, 1913) referred to the date of Sclater's description. It was, however, misrecorded in Poynton's (1964) monograph of the subcontinent's amphibians, and this has subsequently been repeated in Boycott (1982). Even more seriously, the date of publication is incorrect in the definitive book *Amphibian Species of the World* (Frost, 1985).

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THE ADVENTURES OF SPOT

# NEW LIZARD DISTRIBUTION RECORDS FOR THE NORTHERN CAPE PROVINCE OF SOUTH AFRICA

**M.F. Bates & A.F. Flemming**

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During the course of field work in the Northern Cape province, aimed mainly at collecting specimens of *Agama a. atra* for a Ph.D. project (AFF), several additional specimens of other species were also collected. Those representing interesting new distribution records are recorded here.

All specimens were collected on the farm Poortjie (29°18'S, 19°16'E; 2919Ad1) near Pofadder on 19 July 1993 by A.F. Flemming and M. Flemming, and deposited in the herpetological collection of the National Museum, Bloemfontein (NMB). Body measurements are expressed as follows: snout-vent length + tail length = total length (mm).

**Gekkonidae**

**PACHYDACTYLUS BIBRONII** A. Smith, 1846: Bibron's Gecko; NMB R7156-57, two adults measuring 95,6 + 75,6 = 171,2 mm and 86,3 + 66,7 (regenerated) = 152,9 mm respectively, collected in granite rock crevices. The nearest other records are at loci 2918Ba (about 80 km to the NW) and 2819Dd (about 90 km to the NE) (see map in Visser, 1984a).

**Scincidae**

**ACONTIAS LINEATUS TRISTIS** Werner, 1911: Striped Legless Skink; NMB R7161, subadult measuring 72,4 + 17,5 = 89,9 mm found under loose stone in sandy area. Dorsum yellowish-cream with 6 dark, longitudinal stripes from back of head to tip of tail (excluding the two outer stripes which fade out on posterior part of tail), as well as a longitudinal series of dark stipples on each flank which fades both anteriorly and posteriorly; venter cream, unmarked. Chin shields bordering mental 3; mid-body scale rows 14; subcaudals 42. The following values refer to either side of the head: supraoculars 2 (? 1); postoculars 1; preoculars 1; suboculars 2; supraciliaries 2; upper labials 4 (usually 5 in the nominate subspecies). The nearest other locality plotted by Broadley & Greer (1969) is at locus 2919Aa, presumably referring to their "Pella-Aggenys" record. Pella (2919Aa) and Aggeneys (2918Bb) are towns, the "Pella-Aggenys" locality presumably referring to the route between the two, the midpoint of which is represented by 2919Aa. The new locality thus extends the known range by about 37 km to the south-east, and is the most easterly record for the subspecies.

**Lacertidae**

**PEDIOPLANIS NAMAQUENSIS** (Dumeril & Bibron, 1839): Namaqua Sand Lizard; NMB R7162, a single specimen measuring 33,1 + 77,9 = 111,0 mm found in a granite rock crevice. This locality is about 100 km SE of the nearest other record at locus 2818Cd (see map in Visser, 1984b).





**PEDIOPLANIS LINEOOCELLATA PULCHELLA** (Gray, 1845): Ocellated Sand Lizard; NMB R7163, a single specimen measuring 28,1 mm SVL found in a granite rock crevice. This locality is about 80 km SE of the nearest other record at locus 2918Ba (see maps in Visser, 1984b and Branch, 1988).

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THE ADVENTURES OF SPOT

# 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* for reptiles and Passmore & Carruthers' *South African Frogs* 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, quarter-degree grid unit, and latitude and longitude if available; 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.

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## REPTILIA
## SAURIA

### AGAMIDAE

**STELLIO ATRICOLLIS**
**Tree Agama**
**REPRODUCTION**

The nest of a *S. atricollis* was accidentally dug up from moist soil in a garden in Hayfields, Pietermaritzburg in KwaZulu-Natal province (29°37'S, 30°24'E; 2930Cb) on 28 March 1995. There were five eggs and one fresh egg-shell, presumably of a recently hatched egg. One egg was opened to reveal a fully developed embryo (46,5 mm SVL + 33,5 mm tail length = 80,0 mm total length). The embryo was preserved and sent to the Transvaal Museum. The remaining four eggs were measured and weighed: (1) 18 x 27 mm, 6,25 g; (2) 20 x 26 mm, 7,1 g; (3) 21 x 28 mm, 7,27 g; (4) 21 x 28 mm, 7,34 g. Branch (1988, *Field Guide to the Snakes and other Reptiles of Southern Africa*, Struik, Cape Town) reported larger clutch sizes (8-14) and smaller eggs (10-18 x 22-27 mm).

Submitted by: **O. BOURQUIN** (Natal Parks Board, P.O. Box 662, Pietermaritzburg 3200, South Africa).

### SCINCIDAE

**MABUYA CAPENSIS**
**Cape Skink**
**DIET**

Three male *Mabuya capensis* were collected on 2 October 1994 in Reyno Ridge, a suburb of Witbank in Mpumalanga (Eastern Transvaal) province. Two specimens measured 172 mm and 207 mm total length respectively, were of the usual light brown colour, with three pale stripes and short black bars or spots between. The other male





measured 225 mm total length and was uniform grey-brown with a vague, pale stripe and no other markings. The specimens were housed in a glass tank measuring 1470 x 370 mm with a heat spot provided by a 100W Linodyn Pflanzenglühlampe. They were fed a selection of moths, crickets, beetles, butterflies and grasshoppers almost every day. Insects were sprinkled with "Beefee Powder" once a month. On 10 November 1994 the uniform specimen shed its skin and immediately proceeded to eat it, leaving only a section a hind leg's skin behind. Six weeks later this same individual also consumed a juvenile Striped Skink (*Mabuya striata punctatissima*) of approximately 70 mm in total length which had been dropped into the cage together with a few insects. I have not been able to find any information on Cape Skinks eating their shedded skins. Branch (1988, *Field Guide to the Snakes and other Reptiles of Southern Africa*, Struik, Cape Town) reported that *M. capensis* are known to prey on Variable Skinks (*Mabuya varia*).

**Acknowledgement**: Dr N.H.G. Jacobsen is thanked for commenting on the text.

Submitted by: **A. DE VILLIERS** (P.O. Box 13304, Leraatsfontein, 1038, South Africa).

**MABUYA VARIEGATA VARIEGATA**
**Variegated Skink**
**REPRODUCTION**

On 11 December 1994, two gravid female *M. v. variegata* were collected on the farm Keurfontein, Uitenhage district, Eastern Cape province (33°37'S, 25°19'E; 3325Cb) by members of the Port Elizabeth Herpetological Club. The females were taken to the Port Elizabeth Snake Park, where they were maintained until the birth of the young. The first female (44,4 mm snout-vent length, tail broken, mass 1,75 g) gave birth to three young on 5 January 1995. They measured: SVL - mean 22,3 mm, range 22,2-22,4 mm, S.D. 0,01 g; total length - mean 52,2 mm, range 52,0-52,4 mm, S.D. 0,26 mm; mass - mean 0,27 g, range 0,26-0,28 g; S.D. 0,16 mm. The female and two neonates were deposited in the herpetological collection of Port Elizabeth Museum (PEM R10859, 10860-61). The second female (PEM R10868 - 47,9 + 63,1 mm = 111,0 mm; 3,6 g) gave birth to one neonate (found dead in its embryonic sac) before dying. She contained three more fully developed young.

Surprisingly little is known about the reproduction of this common species. De Waal (1978, *Mem. nas. Mus., Bloemfontein* 11: 1-160) reported on a female *M. v. variegata*, collected in December, which contained three partly-developed embryos. Branch (1988, *Field Guide to the Snakes and other Reptiles of Southern Africa*, Struik, Cape Town) reported that 2-4 young measuring 48-57 mm are born from January to March. Jacobsen (1989, *A herpetological survey of the Transvaal*, Ph.D. thesis, University of Natal, Durban) reported that the northern subspecies, *M. v. punctulata*, gives birth to 2-4 young measuring 18,0-20,0 mm SVL and 22,5-33,0 mm tail length, mass 0,10-0,15 g. No detailed measurements for the southern subspecies were found in the literature.

**Acknowledgements:** Mr R. Hall is thanked for assistance in the collecting and maintenance of the live specimens; Dr W.R. Branch commented on the text.

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

## SERPENTES

### COLUBRIDAE

**PHILOTHAMNUS NATALENSIS OCCIDENTALIS**
**Western Natal Green Snake**
**DIET**

On 8 March 1995 an adult male *P. n. occidentalis* was found dead on the road at the Marine Drive entrance to the University of Port Elizabeth (33°59';S, 25°43'E, 3325Dc). The snake measured 663 mm (427 mm SVL + 236 mm tail length) in total length and weighed 21,8 g. On dissection it was found to contain the regenerated tail and pelvic girdle of an adult *Pachydactylus maculatus*, as well as a partly digested *Hyperolius marmoratus verrucosus*. Both prey items were swallowed head first. The *Hyperolius* specimen had a hind limb length of 42,2 mm. The snake and gut contents were deposited in the herpetological collection of the Port Elizabeth Museum (PEM R11276).

The inclusion of amphibians in the diet of *Philothamnus natalensis* is not surprising. Broadley (1990, *FitzSimons' Snakes of Southern Africa*, Jonathan Ball & Donker, Johannesburg) stated that their diet comprised mainly frogs, although Marais (1992, *A Complete Guide to the Snakes of Southern Africa*, Southern Book Publishers, Halfway House) illustrated an adult snake feeding on a gecko (cf. *Hemidactylus*). Alexander (1987, *The herpetofauna of municipal Durban: A biogeographical review*, M.Sc. thesis, University of Natal, Durban) noted that *P. n. natalensis* is apparently a lizard specialist, feeding mainly on geckos, but also skinks, while *P. n. occidentalis* apparently feeds mainly on frogs. This note appears to be the first record of a terrestrial lizard in the diet of *P. n. occidentalis*.

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

**CROTAPHOPELTIS HOTAMBOEIA**
**Red-lipped Snake**
**SIZE**

A large, adult male *C. hotamboeia* from Kragga Kamma, Port Elizabeth (33°57'S, 25°30'E; 3325Dc) was brought to the Port Elizabeth Snake Park on 22 January 1994. The snake settled down in captivity, regularly accepting amphibian prey items. During October 1994 it was accidently injured and later euthenased. At death, the male had a total length of 829 mm (701 mm SVL + 128 mm tail length) and weighed 96,8 g. It was deposited in the herpetological collection of the Port Elizabeth Museum (PEM R10866). This appears to be a new size record for the species. Broadley (1990, *FitzSimons' Snakes of Southern Africa*, Jonathan Ball & Donker, Johannesburg) noted that the largest measured specimens of *C. hotamboeia* were: male - 810 (695 + 115) mm, female - 808 (710 + 98) mm, but added that adults may attain 1 m in length.

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





### VIPERIDAE

**BITIS CAUDALIS**
**Horned Adder**
**SIZE**

During December 1988 the Transvaal Museum received a female *B. caudalis* of exceptional size. It was found by C. Owen, floating in a half-drowned state in the open water canal east of the Waterberg in Namibia. It recovered completely and was kept in a large terrarium. This specimen, which was always in excellent to obese condition, started refusing food at the beginning of the month and died on 17 November 1994. After death she measured 600 mm (548 mm SVL + 52 mm tail length) and weighed 261,6 g. The specimen was deposited in the herpetological collection of the Transvaal Museum (TM 79404).

Previously recorded maximum sizes for this species are: female UM 13170 (Khuis, Botswana) 515 (470 + 55) mm; male TM 5923 (farm Nakeis, Great Namaqualand) 459 (417 + 45) mm (Broadley, 1990, *FitzSimons Snakes of Southern Africa*, Jonathan Ball & Donker, Johannesburg). On re-examination, the latter specimen proved to be a female with a long tail and $^{30}/_{29}$ subcaudals.

As a specimen kept in captivity for nearly six years might not be acceptable as a size record, and as the "male" record mentioned above proved erroneous, an examination of all data for this species accumulated in the Transvaal Museum seemed pertinent. The largest wild-caught female is TM 32745, found 3 km S of Ganab, Namib Naukluft Park, Namibia: 523 (486 + 37) mm. TM 31265, found at Gorob, Namib Naukluft Park, measured: 510 (465 + 45) mm, and is the only other wild caught specimen, apart from UM 13170, which exceeds 500 mm in total length. Several female specimens in the TM collection exceed 450 mm total length. Regarding the maximum size of males, only a single specimen (SMWN 21018: Lüderitz, Namibia), in the State Museum, Windhoek collection, exceeds 400 mm: 408 (372 + 36) mm. This specimen was not re-checked. The next longest specimens are TM 35315 (Nabas, Richtersveld) 399 (357 + 42) mm, and TM 5919 (Farm Gründorn, Keetmanshoop district, Namibia) 375 (334 + 41) mm.

In conclusion, females may exceed 500 mm, but males seldom reach 400 mm total length.

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

## TESTUDINES

**PELOMEDUSIDAE**

**PELUSIOS SINUATUS**
**Serrated Hinged Terrapin**
**REPRODUCTION**

During the evening of 19 January 1995 a serrated terrapin was observed laying eggs in a tortoise and terrapin enclosure at the Natal Parks Board's Crocodile Centre, St Lucia (28°21'30"S, 32°25'E; 2832Ad), KwaZulu-Natal. The nest was dug up the next day and a clutch of 25 eggs was removed. The eggs had been buried in sand 100 - 210 mm below the surface and were covered in slime. Five randomly selected eggs were measured and weighed: (1) 26,0 x 43,2 mm, 20 g; (2) 25,6 x 44,4 mm, 20 g; (3) 25,1 x 44,9 mm, 18 g; (4) 25,1 x 42,2 mm, 21 g; and (5) 24,3 x 44,7 mm, 20 g. The eggs were packed in moist vermiculite in a polystyrene incubation box and placed in an incubator. The latter is a room 4 x 4 m, the sides consisting of two walls of 90 mm hollow concrete blocks with 40 mm styrofoam between them. The incubator has an asbestos ceiling insulated with fibreglass matting and has underfloor heating. Water is sprinkled on the floor of the incubator on a daily basis in order to maintain humidity; temperature ranged between 32° and 33°C. On 8 March 1995, 48 days after being laid, 24 hatchlings emerged. The remaining egg was rotten. All hatchlings had protruding yolk sacs. The hatchlings were measured and weighed the same day (8 March 1995). The ranges of shell length (SL) in combination with shell width (SW) and mass (m) were: 42,8 mm (SL) x 16,7 mm (SW), 13 g (m) - 40,5 (SL) x 17,2 (SW) mm, 12 g (m); and the ranges of shell width in combination with shell height and mass were: 18,7 mm (SW) x 42,1 mm (SH) x 13 g (m) - 16,3 (SW) x 42,7 (SH) mm x 14 g (m). Mass ranged from 12 - 14,9 g (mean 13,2 g). It is likely that incubation periods are considerably longer under natural conditions. According to Boycott & Bourquin (1988, *The South African Tortoise Book*, Southern Book Publishers, Johannesburg) and Branch (1988, *Field Guide to the Snakes and other Reptiles of Southern Africa*, Struik, Cape Town), nests are excavated in October and November, as far as 500 mm from the nearest water; and 7-13 eggs are laid, hatching in March and April. The clutch size reported here is much larger than that given by Boycott & Bourquin (*op. cit.*) and Branch (*op. cit.*). Egg and hatchling dimensions and masses have not previously been recorded.

**Acknowledgement:** Dr O. Bourquin is thanked for commenting on the text.

Submitted by: **N.B. ANDERSON** (St Lucia Crocodile Centre, Private Bag X01, St Lucia 3936, South Africa).





# 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, quarter-degree grid unit, and latitude and longitude if available; 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.

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## REPTILIA
## SAURIA

**SCINCIDAE**

**MABUYA SULCATA SULCATA** (Peters, 1867): Western Rock Skink; South Africa, Western Cape province, Farm: Glenlyon (31°25'S, 19°05'E; 3119Ac3) near Nieuwhoudtville; 20-21 May 1992; A.F. Flemming & M. Flemming; National Museum, Bloemfontein, NMB R6925. Male measuring 69,0 mm SVL + 90,6 (tip missing) mm tail length = 159,7 mm total length, found in sandstone rock crevice. This locality represents a south-westerly extension of the species' range (see map in Branch, 1988, *Field Guide to the Snakes and other Reptiles of Southern Africa*, C. Struik, Cape Town).

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**GERRHOSAURIDAE**

**GERRHOSAURUS MULTILINEATUS AURITUS** Boettger, 1887: Kalahari Plated Lizard; Zimbabwe, Hwange National Park, two localities: (1) 3 km NE of Little Dzivanini Pan (1926Da); 16 April 1994; G.S.A. Rasmussen; Natural History Museum of Zimbabwe, NMZB 13461; subadult (85 mm SVL) collected in sympatry with *G. nigrolineatus*; (2) 4 km E of Shakwanki spring (1926Ab); 4 May 1994; G.S.A. Rasmussen; NMZB 13521, juvenile (67 + 150 = 217 mm). First records for Zimbabwe, although recorded in 1964 from just inside Botswana at Tamafupa Pan (1926Ac) (Broadley, 1988, *Arnoldia Zimbabwe* 9(30): 369-430).

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**CORDYLIDAE**

**CHAMAESAURA MACROLEPIS MACROLEPIS** (Cope, 1862): Large Scaled Snake-lizard; Transvaal, Farm Helpmakaar 819 LS (23°37'05" S, 29°57'12" E; 2329Db, alt. 1150 m); 22 March 1991; N.H.G. Jacobsen; Transvaal Museum, TM 79352; collected at 10h30 on tarred road between Mokeetsi and Pietersburg in grassland/scrub at the edge of the Pietersburg False Plateau. This record extends the range of the species 68 km south of the Soutpansberg, 150 km north of the main distribution (Branch, 1988, *Field Guide to the Snakes and other Reptiles of Southern Africa*, Struik, Cape Town; Jacobsen, 1990, *A herpetological survey of the Transvaal.* Ph.D. thesis, University of Natal, Durban). It is therefore intermediate between the main population and relict populations further north.

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## SERPENTES

**COLUBRIDAE**

**PROSYMNA ANGOLENSIS** Boulenger, 1915: Angola Shovel-snout; Zimbabwe, two localities: (1) Hwange district, Malindi Siding (1827Ca); December 1994; R. Lornie, via G.S.A. Rasmussen; Natural History Museum of Zimbabwe, Bulawayo, NMZB 13787-88, adult and subadult males trapped in a trench in Kalahari sand; (2) Nyamandhlovu district, St. James' Mission School (Inyokene: 1928C3); February 1995; S.P. Wilson; NMZB 13953; adult male trapped in a pit in Kalahari sand at night. First records for Zimbabwe, representing an eastward range extension of 300 km from Geoverega, Botswana. The second locality is also the southernmost record for the species.

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**VIPERIDAE**

**BITIS ATROPOS** (Linnaeus, 1754): Berg Adder; South Africa, Eastern Cape province: three localities: (1) Southern Drakensberg, farm Killrush, Barkley East district (30°59'S, 27°58'E; 3027Dd; alt. ± 2200 m); 30 April 1994, R. Thétard, deposited in the herpetological collection of the Port Elizabeth Museum (PEM R11725). Adult female measuring 519 (476 + 43) mm and weighing 148,6 g; overall dull grey colour with poorly developed, half-moon patterning on the back. Scutellation: ventrals 142, subcaudals 22, anal entire. (2) Witteberg, farm Snowdon, Barkley East district (30°43'S, 27°29'E; 3027Cb); sight record, December 1994, R. Thétard (3) Naude's Neck, Cape Drakensberg (30°44'S, 28°07'E; 3028 Ca); sight record, photographed whilst swallowing a *Lycodonomorphus rufulus* - slide deposited in the herpetological collection of the Port Elizabeth Museum.

These are the first records for the southern Drakensberg and north-eastern part of the Eastern Cape. The distribution of Berg Adders can be divided into four distinct populations, namely: (1) Cape Fold Mountains from Table Mountain to Port Elizabeth; (2) Natal Drakensberg, adjacent Lesotho (Haagner, 1991, *J. Herpetol. Assoc. Afr.* 39: 20) and north-eastern Free State (Bates, 1992, *The herpetofauna of the Orange Free State -*





*with special emphasis on biogeographical patterning*, M.Sc. thesis, University of Natal, Durban); (3) Drakensberg escarpment of the Northern and Eastern Transvaal, and adjacent Swaziland (Haagner & Hurter, 1988, *Koedoe* 31: 71-76); and (4) eastern highlands of Zimbabwe and adjacent Mozambique (Broadley, 1990, *FitzSimons' Snakes of Southern Africa*, Jonathan Ball & Donker, Johannesburg). The Killrush record confirms the presence of the species in the southern Drakensberg and indicates a range extension of approximately 260 km from the Natal Drakensberg population and 220 km from the north-eastern Free State records. The taxonomic status of the geographical isolates is currently being investigated (Branch & Haagner, in prep.).

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**ATHERIS SQUAMIGERA SQUAMIGERA** (Hallowell, 1854): Gabon Tree Viper; Tanzania, Ziwa Magharibi Region, Karagwe district, Rumanyika Game Reserve (SE 0130Bb); 8 February 1991; J. Bjornstadt, via K.M. Howell; Natural History Museum of Zimbabwe, NMZB 11501-2. Two fragmentary, decomposed male specimens, each with rodent remains in the stomach. This is the first record of the species from Tanzania, the locality being only a few kilometres east of Mpororo Swamp, the type locality for *Atheris nitschei* Tornier.

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## TESTUDINES

**PELOMEDUSIDAE**

**PELUSIOS SUBNIGER SUBNIGER** (Lacepede, 1789): Pan Hinged Terrapin; Botswana, Mmadinare, 20 km NW of Selebi Phikwe (21°07'05"S, 27°06'06" E; 2127Dd; alt. 1200 m); January 1993; B.C.W. van der Waal; Transvaal Museum, TM 79327; adult male with a plastron length of 113 mm, a width of 99 mm across the 8th marginals, and a mass of 325 g; collected in a shallow pool along the Motloutse River at the site of the new Letsibogo Dam in the company of *Pelusios sinuatus* and *Pelomedusa subrufa*. This record is intermediate to those in north-eastern Botswana (Auerbach, 1987, *The Amphibians and Reptiles of Botswana*, Mokwepa Consultants, Gaberone) and the sandveld pans of the eastern Kruger National Park (Pienaar, Haacke & Jacobsen, 1983, *The Reptiles of the Kruger National Park*, National Parks Board of Trustees). It also indicates that the species may emulate the distribution of *P. sinuatus* along the upper Limpopo River system wherever suitable habitat occurs.

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# RECENT AFRICAN HERPETOLOGICAL LITERATURE: 16

**[1]G.V. Haagner, [2]M. Burger & [1]W.R. Branch**

[1]*Port Elizabeth Museum, P.O. Box 13147, Humewood 6013, South Africa*
[2]*Cape Nature Conservation, Private Bag 1006, Grahamstown 6140, South Africa*

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# FROM THE PRESS:

## TORTOISES LOVE HOME

(*Weekly Mail & Guardian*, 3-9 March 1995, p. 5)

**Shadley Nash in Port Elizabeth**

United States scientist Dr Craig Weatherby has confirmed what people have long suspected: tortoises are homely creatures.
South Africa has the largest number of different land tortoises in the world, says Weatherby, an ecological researcher from Michigan who recently completely a study of tortoises at the Addo Elephant National Park.
His preliminary research has shown that tortoises, like many other animals, display "site fidelity": at a specific time they return to the same place they were the year before.
Weatherby's studies, which include criteria such as the space tortoises need to live and their seasonal preferences, are aimed at the preservation of the centuries-old animals.
What they need to survive, he says, is to be left alone by humans: "Displacement is not a good thing for them." - Ecna

Submitted by: **E. DU PISANI** (1 Capri Court, Union Avenue, Bloemfontein 9301, South Africa).

**********

## VROU STERF BY PHILIPPOLIS Ná GEELSLANG SE BYT

(*Die Volksblad*, 21 January, 1995)

PHILIPPOLIS - 'n Xhosa-vrou wat op 'n plaas in die distrik deur 'n geelslang gepik is, is dieselfde dag in die hospitaal in Jagersfontein dood.
Me. Ruta Tsetso is Sondag op die plaas Klein Waaihoek van mnr. Niklaas du Plessis deur die slang gepik. Sy het by mnr. Barnie Majya, 'n werker op die plaas, gebly.
Mnr. Du Plessis het met me. Tsetso na die plaaslike distriksgeneesheer, dr. Fanie Bouwer, gejaag. Hy het haar na die hospitaal in Jagersfontein verwys. Sy is daar oorlede.
Die slang is eers Maandag doodgemaak. Dit is sover bekend die eerste keer in jare dat iemand in Philippolis weens 'n slangbyt sterf.
Geelslange, wat tot 1,8 m lank kan word, is al van vroeg in hul lewe giftig. Die gif tas die menslike senuweestelsel aan.
Die slang wat me. Tsetso gepik het, was maar 30 cm lank.

(**English:** *A woman was bitten by a 30-cm-long Cape Cobra* Naja nivea *on a farm near the southern Free State town of Philippolis, and died after being rushed to a hospital in Jagersfontein.)*

Submitted by: **E.A. DE VILLIERS** (Librarian, National Museum, P.O. Box 266, Bloemfontein 9300, South Africa).

*A New Facsimile Reprint from the Society for the Study of Amphibians and Reptiles*

# THE HERPETOLOGICAL PUBLICATIONS OF WILHELM PETERS

*With an Extensive Introduction, Annotated Bibliography, and Synopsis of Taxa by*

**AARON M. BAUER, RAINER GüNTHER, AND MEGHAN KLIPFEL**

WILHELM C.H. Peters, the leading German herpetologist of the 19th century, was Director of the Zoological Museum in Berlin. His main interest was in systematics and anatomy, but his primary contribution to herpetology was the description of **122 NEW GENERA AND 649 NEW SPECIES FROM THROUGHOUT THE WORLD** - mainly Africa, Asia, Australia and South America - representing 56 families of amphibians and reptiles, including 32 hylid frogs, 7 turtles, 29 agamids, 32 geckos, 111 skinks, 3 monitors, 5 pythons, 118 colubrids, and 10 vipers. About 65% of these species are valid today.

Despite their continuing importance, Peters' publications are not generally available. This reprint includes all of his herpetological books and papers, 173 titles in all, with outstanding plates containing hundreds of individual figures. These titles include four major works: monographs on the uropeltid snakes of South Asia, the microteiid lizards of Tropical America. A catalogue of Indoaustralian amphibians and reptiles, and Peters' 239-page book on the herpetology of Mozambique (Southeast Africa), based on his own expedition in 1842-1848. Most papers are in German, with others in Italian, English, Latin, Swedish, and French. Since many of Peters' taxonomic papers were printed in a small format, by modest reduction to about 75% of original size it is possible to print four of them per page of facsimile. As a result, **THIS BOOK COMPRISES 1562 PAGES OF ORIGINAL TEXT AND 114 PLATES.** Peter's book on Mozambique, however, is printed in full-page size. Added to these facsimiles in an introduction containing an illustrated biography of Peters, an annotated bibliography of his papers, a synopsis of taxa described by Peters that lists types, type localities, current names, and many other essential details, and an extensive cross-index to the volume.

*Specifications*: 725 pages, 9 photographs, map, 114 plates, index. Format $8^1/_2$ x 11 inches (21.5 x 28 cm). Clothbound. To be published September 1995. ISBN 0-916984-35-4.

- Price to SSAR members *before publication* ... US$55
- Price to Institutions and Non-members ... $75
- *Shipping*: In USA, add $2; non-USA, add $4.

**Send orders to** Robert D. Aldridge, SSAR Publications Secretary, Department of Biology, St. Louis University, 3507 Laclede Avenue, St. Louis, Missouri 63103, USA (*Telephone*: area code 314, 977-3910 or -3916; *fax*: 314, 977-3658). Make checks payable to "SSAR". Overseas orders must be paid in USA funds using a draft drawn on American banks (include an additional amount to cover bank conversion charges) or by International Money Order. Orders may be charged to MasterCard or VISA (provide account number and expiration date). SSAR membership details and a complete list of Society publications can be obtained on request to Dr. Aldridge.

# CAPE PROVINCIAL ADMINISTRATION

## CAPE NATURE CONSERVATION

## MEDIA RELEASE FOR IMMEDIATE USE

### Sentence for illegal export of thousands of platannas

14/7/95

**BEGIN**

Cape Nature Conservation (CNC) hereby announces that in April this year, Mr Robert Jacobs was found guilty of the illegal collection, possession, transport and export of platanna frogs. This was after Mr Jacobs had been caught earlier this year with 13 000 platannas which he was about to export to the United States of America. At the time he was only in possession of an export permit for 100 frogs. Legal proceedings were instituted against Mr Jacobs on the recommendation of the attorney-general.

Mr Jacobs was charged under various sections of the nature conservation ordinance (Ord. 19 of 1974). He was sentenced in the Bellville regional court to R6 000,00 or 8 months' imprisonment for the illegal transport and export of the frogs. However, R2 000,00 or 2 months of this sentence was suspended for 3 years on condition that, during this period, he is not found guilty of either possessing any wild animal or trading in wild animals. This would be a contravention of Section 44(1)(a) or (e) of the nature conservation ordinance. He was also given an additional fine of R1 500,000 or 3 months' imprisonment for the illegal collection and possession of the frogs. Furthermore no permit or licence or any similar form of permission with reference to the Nature Conservation Ordinance may be granted to Mr Jacobs for 18 months following on the date of sentence.

According to Mr Kobus Jooste, director of CNC, the sentence is encouraging as it reflects the serious light in which the courts view these offences. He also said that he hoped this would, seen with the sentence received in this case, discourage prospective smugglers.

CNC first became suspicious after requesting information from the American nature conservation authority concerning the number of frogs imported into the country. It became clear that vast quantities of frogs, and considerably more than CNC had granted permission for, had been exported to the USA. In fact, investigations revealed that an astonishing 1 185 000 platannas were sent to a dealer in the USA during the period of February 1992 to January 1994. Of these, a total of only 3 000 were exported with valid permits. Common platannas can be sold for about $2,00 per frog in which case the estimated value of export efforts such as these would could be R8 532 000.

Although common patannas are not threatened, they are nevertheless protected under the Cape Nature Conservation Ordinance along with most other indigenous plant and animal species. The common platanna is a very adaptable species and conservation biologists in the USA are concerned about this frog species becoming established where it can pose a threat to their wildlife.

**ENDS**





# BIODIVERSITY OF SUB-SAHARAN AFRICAN REPTILES AND AMPHIBIANS

*Background*

Mapping biodiversity is important for conservation planning and to allow investigations into the processes which influence the distribution and magnitude of biodiversity.

An attempt is being made to assess the distribution of reptile and amphibian biodiversity in Sub-Saharan Africa. This is being co-ordinated by Dr. Neil Burgess, University of Copenhagen and Lynn Raw of the University of Natal. We are also collaborating closely with Don Broadley, John Poynton, Arne Schiotz, the Natural History Museum (London), the World Conservation Monitoring Centre in Cambridge (UK) and the Species Survival Commission of IUCN.

The aim of the project, which will run for three years, is to produce a map of species-richness, endemism and the key 'gaps' in the protected area network for African herptiles. Once available, these data can be further analysed to try and better understand the reasons for the distribution patterns observed. This would form a stage II to this project, stage I being involved in generating the mapped biodiversity data.

Analysing biodiversity patterns and magnitude is quite possible using computerised methods of analysing grid-based distribution data at the African scale. However, in order to do the analysis there are two major requirements:

*What this project needs*

1. A simple list of African reptile and amphibian species. An amphibian list has been compiled by John Poynton. A draft version of the reptile list is being compiled in Copenhagen from the list of Welch (1983), with updates.

2. Distribution range maps for African herptile species. Many of these already exist in the literature and these will form the basis of the data used for analysis. However, for many other species, maps are not available in the existing literature.

*How might you help this project realise its objectives?*

The project will be working hard from Denmark to try and realise its objectives. However, we are extremely keen to collaborate with scientists from all parts of the world to develop the two key requirements outlined above. Collaboration and assistance is welcomed in the following three areas:

a) Commenting upon the draft list of reptile species of Sub-Saharan Africa, and helping to develop it into a usable working document which can be used as the backbone of the distributional data-base on the computer.

b) Assisting the co-ordinators of the project to locate existing published species-distribution data for the amphibians and reptiles of Africa.

c) Assisting the co-ordinators of the project to generate species-distribution maps for the amphibian and reptile species of Africa. There is great scope for maps to be generated from the personal knowledge held by herpetologists of the species and where it occurs in Africa. Base maps at the 1 degree square scale for Africa can be supplied by the co-ordinators to assist the compilation of a uniform set of herptile distribution maps. The project will use distribution range maps as the basic unit of analysis.

d) Assisting the co-ordinators of the project to check and update species distribution maps for African herptiles. If there are specific groups of species, or areas of Africa where you would be most interested to help, we would be very pleased to hear from you.

*How can you get involved?*

If you are interested in this project, or would like to help with any of the above areas, then please do not hesitate to contact us.

All assistance with this project will be fully acknowledged in any resulting publications. The authors will not be making any money from data provided, and will certainly not copy or otherwise distribute any data provided without the express written permission of those people who provided that data. We are doing this with the conservation of African reptiles and amphibians in mind, and hope to make the resulting outputs as valuable as possible in this respect.

We look forward to hearing from you.

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# CHANGES OF ADDRESS

**Dr N.H.G. Jacobsen's new address is:**

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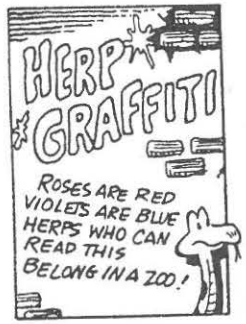
Hercules
0030
South Africa

**Dr A.J.L. Lambiris's new address is:**

22 Ashley Road
West Riding
Hillcrest
3610
South Africa

## THE ADVENTURES OF SPOT




HERPETOLOGICAL ASSOCIATION OF AFRICA
ANNUAL FINANCIAL STATEMENTS
28 FEBRUARY 1995

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The annual financial statements set out on pages 1 to 3 were approved on 2 June 1995 and are hereby signed to that effect.

.....
CHAIRMAN

.....
TREASURER






SELVAN PILLAY
Chartered Accountants (S.A.)
incorporating D'ABBADIE & PARTNERS


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

We have audited the annual financial statements set out on pages 2 to 3. These financial statements are the responsibility of the members. Our responsibility is to report on these 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 a 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 present the financial position of the HERPETOLOGICAL ASSOCIATION OF AFRICA at 28 February 1995 and the results of its operations for the year then ended.

SELVAN PILLAY
Chartered Accountants (S.A.)
INCORPORATING D'ABBADIE & PARTNERS

DURBAN
2 June 1995

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HERPETOLOGICAL ASSOCIATION OF AFRICA
BALANCE SHEET
28 FEBRUARY 1995

| | 1995 R | 1994 R |
|---|---|---|
| **FUNDS EMPLOYED** | | |
| ACCUMULATED FUND | | |
| Balance at beginning of year | 31 152 | 23 343 |
| Net Surplus for the year | 7 906 | 7 809 |
| | 39 058 | 31 152 |
| **EMPLOYMENT OF FUNDS** | | |
| NET CURRENT ASSETS | 39 058 | 31 152 |
| CURRENT ASSETS | 39 847 | 31 152 |
| UBS - Bloemfontein | 8 | 101 |
| UBS - Durban | 18 327 | 15 016 |
| Standard Bank - Bloemfontein | 15 641 | 13 879 |
| Cash on hand | 228 | 170 |
| Volkskas - Durban | 5 643 | 1 986 |
| CURRENT LIABILITIES | | |
| Accounts payable | 789 | - |
| | 39 058 | 31 152 |





HERPETOLOGICAL ASSOCIATION OF AFRICA
INCOME STATEMENT
FOR THE YEAR ENDED 28 FEBRUARY 1995

| | 1995 R | 1994 R |
|---|---|---|
| INCOME | 16 438 | 25 649 |
| Interest | 2 872 | 1 745 |
| Sales of journals | 490 | 330 |
| Subscriptions | 13 076 | 13 050 |
| Symposium | - | 10 524 |
| EXPENSES | 8 532 | 17 840 |
| Audit fees | 450 | 399 |
| Symposium | - | 6 581 |
| Journals | 2 096 | 6 219 |
| Newsletters | 4 550 | 3 630 |
| Postage, photocopies and telephone | 1 436 | 1 011 |
| NET SURPLUS FOR THE YEAR | 7 906 | 7 809 |

## HERPETOLOGICAL ASSOCIATION OF AFRICA
## MEMBERSHIP FEES AS AT 1 JANUARY 1996

### AFRICAN MEMBERSHIP

**ORDINARY MEMBERSHIP**

**1 year membership R40.00.** Submit in Rand or equivalent U.S. Dollar plus 10%.
**3 year membership R110.00.** Submit in Rand or equivalent U.S. Dollar plus 10%.

**SCHOLARS MEMBERSHIP**

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

### OVERSEAS MEMBERSHIP

**DOLLAR PAYMENTS**

**Note:** Please, no U.S. "postal" money orders or U.S. Dollar "Eurocheques". Rand Eurocheques may be acceptable.

**1 year membership $25.00.** Submit in U.S. Dollars by personal cheque or money order.
**3 year membership $70.00.** Submit in U.S. Dollars by personal cheque or money order.

**RAND PAYMENTS FROM OVERSEAS**

**1 year membership R85.00.** Submit in ZAR or Rand by bankers draft or money order.
**3 year membership R230.00.** Submit in ZAR or Rand by bankers draft or money order.

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

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

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