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HERPETOLOGICAL ASSOCIATION OF AFRICA NEWSLETTER

APRIL 1998 NO. 27

HERPETOLOGICAL ASSOCIATION OF AFRICA

Founded 1965
The HAA is dedicated to the study and conservation of African reptiles and amphibians. Membership is open to anyone with an interest in the African herpetofauna. Members receive the Association's journal, *African Journal of Herpetology* (which publishes review papers, research articles, short communications and book reviews - subject to peer review) and newsletter, *African Herp News* (which includes short communications, life history notes, geographical distribution notes, venom and snakebite notes, short book reviews, bibliographies, husbandry hints, announcements and news items).

Editor's note:
Articles will be considered for publication provided they are original and have not been published elsewhere.

Articles may be submitted for peer review (at least two reviewers) at the Editor's discretion.
Lists of reviewers will be published in the newsletter from time to time.
Authors are requested to submit long manuscripts on disc in ASCII format.

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:
Dr. Angelo Lambiris.

COMMITTEE OF THE HERPETOLOGICAL ASSOCIATION OF AFRICA

EDITORIAL

I would like to thank our past Chairman, Mike Bates, and his Committee for their hard work and dedicated efforts towards the development of the Association. The Newsletter has seen a number of changes under Mike's expert editorship, and it is with some diffidence that I take up the reigns from him - his will not be an easy act to follow.

We had hoped to bring out two issues of the Newsletter in 1997, but the change of editorship and printers, and a rather small number of contributions for inclusion, resulted in an unavoidable delay in the production of this issue. However, teething problems have been successfully overcome, and I am now starting to assemble material for the December issue.

Ernst Baard has taken over organisation of the forthcoming H.A.A. Symposium, to be held in Stellenbosch. The first announcement has already gone out, and a second announcement is enclosed with this issue of the Newsletter.

Contributors to the Newsletter submitting typed scripts are requested to use double spacing and wide margins (at least 2.5 cm) all round, to facilitate editorial preparation. Longer articles may be submitted on disc (Word 6.0 or Word 7.0). Articles may also be sent by e-mail, as a Word 6.0 attachment, to the editor at <lambiris@pixie.udw.ac.za>

Angelo Lambiris
Chairman / Newsletter Editor

NEW H.A.A. COMMITTEE

The new committee members elected in December 1997 are as follows:

Chairman/Newsletter Editor
Dr. Angelo Lambiris

Secretary/Treasurer
Mr. Frank Farquharson

Journal Editor
Dr. Martin Whiting

Additional Members
Mr. Mike Bates
Dr. William Branch
Mr. Rod Douglas
Mr. Wulf Haacke

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museum KOENIG 4th International Symposium

Isolated Vertebrate Communities in the Tropics

FIRST ANNOUNCEMENT

4th International Symposium
Isolated Vertebrate Communities in the Tropics
13 - 17 May 1999 in Bonn, Germany

The Zoologisches Forschunginstitut und Museum Alexander Koenig (ZMFK), Bonn, will hold its 4th international symposium on evolution and ecology of tropical animals from 13 - 17 May 1999. This (4th) symposium will cover evolutionary processes in vertebrate genetics, through populations to species. Theoretical and applied contributions are equally welcome. Studies on non-vertebrates, contributing to our knowledge in vertebrates, will also be considered.

The symposium will be housed in the Gustave-Streseman-Institute, a conference centre close to our Institute where accommodation of participants and logistics for the conference are ideally combined.

Conference fee: Early registration 100,- DM (c. 56,- US$) if paid before 1st February 1999 (fee includes one copy of the proceedings volume), late registration 125,- DM (c. 67,- US$). Accommodation and full board is about 120,- DM (c. 67,- US$) per day and person.

For further information and announcements please contact: Prof. Dr. W. Böhme, Adenauerallee 160, 53113 Bonn, Germany (tel. +49 228 91 22 250, fax ++49 228 216 979, e-mail: r.hutterer.zfmk@uni-bonn.de)

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THE HERPETOLOGY OF THE DANDE COMMUNAL LANDS, GURUVE DISTRICT, ZIMBABWE

Donald G. Broadley, Robstein L. Chidavaenzi, G.S.A. Rasmussen & S. Broadley

Department of Herpetology, Natural History Museum of Zimbabwe, P.O. Box 240, Bulawayo, Zimbabwe.

A survey of the herpetofauna of the middle Zambezi Valley was funded by CIRAD-EMVT as part of their Mid-Zambezi Biodiversity Project, with the collaboration of the Natural History Museum of Zimbabwe and the Biodiversity Foundation for Africa. The fieldwork was carried out by R.L. Chidavaenzi, G.S.A. Rasmussen and S. Broadley from 15-28 March 1997 and the material was identified by the senior author.

The area of Guruve district covered by the survey extends from the Zambezi at Kanyemba along the Mozambique border south of Lake Cabora Bassa and lies below the Zambezi escarpment (Rukowakuona Mountains); the Musengezi River forms the eastern boundary.

The geology of the area is simple. There is paragneiss on the Zambezi escarpment and also to the west in the Chewore Safari Area, giving rise to isolated rock outcrops in the vicinity of Kanyemba. Otherwise the floor of the valley consists of Karroo sandstones with a few relict patches of fossiliferous Cretaceous sandstone. The vegetation was mapped by Timberlake *et al.* (1993) and consists of miombo woodland on the Zambezi escarpment and miombo-mopane woodlands on the valley floor. There are some small patches of *Xylia* dry forest and *Terminalia brachystemma* bushed woodland. The formerly extensive riparian forests and alluvial woodlands have largely been cleared for cultivation.

The few specimens previously collected from this general area are indicated by asterisks (*) in the following checklist. We have also incorporated some records from the SEMG survey of the effects of Endosulfan spraying carried out on the Musengezi River (Muzarabani West) in 1989 (Lauer, 1989). From the present survey, two amphibian species were recorded from Zimbabwe for the first time.

SPECIES ACCOUNTS

REPTILIA

Pelomedusidae

Pelusios sinuatus A. Smith
Serrated Terrapin
Surprisingly, this species was not encountered during the survey, but it has been previously collected in the Musengezi River at Muzarabani West (Lauer, 1989).

Testudinidae

Kinixys spekii Gray
Speke's Hinged Tortoise
Musengezi River Bridge NMZB 11117*.

Geochelone pardalis (Bell)
Leopard Tortoise
One adult was seen on the road in the Dande Safari Area, also recorded at Muzarabani West by Lauer (1989).

Agamidae
Agama kirkii Boulenger
Kirk's Rock Agama
Two specimens: Muzarabani West NMZB 11133*; Mahuwe NMZB 15050. This rupicolous species was only collected on paragneiss outcrops on the escarpment.

Agama armata Peters
Tropical Spiny Agama
Seven specimens: NMZB-UM 9238*; NMZB 14916; Muzarabani West NMZB 8827*; Musengezi Bridge NMZB 11115*; Kadzi River Bridge NMZB 15014-5; Kasuo NMZB 15042.

Only NMZB 14916 is an adult. The three hatchlings have a dark reticulation covering throat, chest and belly.

Jacobsen (1992) reinstated this form as a full species, distinguishing it from *A. aculeata* on the basis of its dark reticulate gular pattern in contrast to the longitudinal lines found in *A. aculeata*. However, there seems to be intergradation between the two patterns in Zimbabwe and it may prove necessary to make *distanti* Boulenger a subspecies of *A. armata*, leaving the large Kalahari form *A. aculeata* as a monotypic species which can be distinguished from *A. armata* by Broadley's key in McLachlan (1981:222). There is no evidence of intergradation between the two patterns in Botswana and they are parapatric near Musu on the southern edge of the Makgadigadi pans.

Chamaeleonidae
Chamaeleo dilepis dilepis Leach
Common Flap-necked Chameleon
Two specimens: Muzarabani West NMZB 9381*; Mashumbi Pools NMZB 15019.

Gekkonidae
Pachydactylus tetensis Loveridge
Tete Thick-toed Gecko
One specimen: Kanyemba NMZB 15004. A subadult collected under the eaves of a chalet built next to an isolated paragneiss outcrop.

Pachydactylus turneri (Gray)
Turner's Thick-toed Gecko
Seven specimens: Muzarabani West NMZB 8823*, 9379*; Mashumbi Pools NMZB 14883-4; 15 km S of Kanyemba NMZB 14914; 10 km NNW of Mahuwe NMZB 15034-5.

Most specimens were taken under loose bark.

Pachydactylus oshaughnessyi oshaughnessyi Boulenger
O'Shaughnessy's Thick-toed Gecko

This species should occur in the area, as there is a specimen from Zumbo (in Mozambique on the north bank of the Zambezi opposite Kanyemba) in the South African Museum (SAM 8069).

Pachydactylus punctatus Peters
Speckled Thick-toed Gecko
17 specimens: Ntube River NMZB 7675*; Mashumbi Pools NMZB 14882; 20 km Mashumbi Pools NMZB 14889; Mururuzi River Bridge NMZB 14898; Marirangwe Range NMZB 14903; 6 km E of Gwase flygate NMZB 14912; 15 km S of Kanyemba NMZB 14992; Dande Safari Area NMZB 14935-6, 14998; 10 km NNW of Mahuwe NMZB

15025-8, 15032; Kasuo NMZB 15043; Mahuwe NMZB 15053.

Lygodactylus capensis capensis (A. Smith)
Cape Dwarf Gecko
Nine specimens: Muzarabani West NMZB 8824*; 20 km W of Mashumbi Pools NMZB 14894-5; Kanyemba NMZB 14931, and 15 km S NMZB 14921; Dande Safari Area 14997, 15002; 10 km NNW of Mahuwe NMZB 15024; Kasuo 15044.

Lygodactylus chobiensis FitzSimons
Chobe Dwarf Gecko
Eight specimens: Muzarabani West NMZB 8825*; 10 km E of Mukanga Bridge NMZB 14094-6; Kanyemba NMZB 14932, 14934; Gonono NMZB 15018; Mahuwe 15051.

Homopholis wahlbergii A. Smith
Wahlberg's Velvet Gecko
Although not encountered during the survey this large gecko was recorded from Muzarabani West by Lauer (1989).

Hemidactylus mabouia (Moreau de Jonnes)
Tropical House Gecko
Eight specimens: Mashumbi Pools NMZB 14885; and 15 km S NMZB 14915, 14920, 14925; Kanyemba NMZB 14918, 14933, 15003; Kadzi Bridge NMZB 15016.

Scincidae
Mabuya margaritifer (Peters)
Rainbow Rock Skink
Eight specimens: Kanyemba NMZB-UM 9236*; NMZB 14917; Mana-Angwa Camp NMZB 7674*; Muzarabani West NMZB 8826*; Mururuzi Bridge NMZB 14897; Murirangwe Range NMZB 14902; Dande Safari Area NMZB 14913; Mahuwe NMZB 15045.
This rupicolous skink was common both on paragneiss on the Zambezi escarpment and on sandstone outcrops on the valley floor.

This form is sympatric with *Mabuya quinquetaeniata* (Lichtenstein) in southeastern Kenya and is to be reinstated as a full species (Broadley & Bauer, in prep.).

Mabuya varia (Peters)
Variable Skink
14 specimens: Kanyemba NMZB-UM 9237*; NMZB 14919, 14928; Ntumbe River NMZB 7676*; Muzarabani West NMZB 8828*, 9387*; Kadzi Bridge NMZB 15011-2, 5017; Mashumbi Pools NMZB 15021; Mahuwe NMZB 15049, and 10 km NNW NMZB 15033; Gonomo NMZB 15054-5.

Mabuya lacertiformis (Peters)
Bronze Rock Skink
Three specimens: Mahuwe NMZB 15046-8.

These specimens were collected on paragneiss outcrops on the Zambezi escarpment.

Mabuya striata wahlbergii (Peters)
Wahlberg's Striped Skink
12 specimens: Muzarabani West NMZB 8829*, 9382-6*; Mashumbi Pools NMZB 14886, & 20 km N NMZB 14890; Mukanga Bridge NMZB 14907; Kadzi Bridge NMZB 15013; Kasuo NMZB 15040; 10 km N of Mahuwe NMZB 15031.

Lygosoma sundevallii (A. Smith)
Sundevall's Writhing Skink
20 specimens: Ntumbe River NMZB 7677*; Mashumbi Pools NMZB 14910, and 20 km W NMZB 14892-3; 12 km S

of Kanyemba NMZB 14924; Dande Safari Area NMZB 14937-48; 10 km NW of Mahuwe NMZB 15023; Kasuo NMZB 15041; Gonono NMZB 15056.

Panaspis sp.
Spotted-neck Snake-eyed Skink
15 specimens: Kanyemba NMZB-UM 9239*, NMZB 14927, 14929, 15006-8; Mashumbi Pools NMZB 14899, 14909, 15036, & 20 km W NMZB 14896; Dande Safari Area NMZB 14950, 14996; 10 km NNW of Mahuwe NMZB 15029; Gonono NMZB 15057-8.

The formal description of this sibling species of *Panaspis wahlbergii* will appear shortly (Jacobsen & Broadley, in prep.).

Lacertidae
Nucras ornata Gray
Ornate Scrub Lizard
Although not encountered during the survey, this species has been recorded from Muzarabani West by Lauer (1989).

Ichnotropis squamulosa Peters
Common Rough-scaled Sand Lizard
Six specimens: Mashumbi Pools NMZB 15020 & 9 km W NMZB 14908; Kadzi Bridge NMZB 15009-10; Gonono NMZB 15059-60. Also recorded from Muzarabani West by Lauer (1989).

Gerrosauridae
Gerrhosaurus validus validus A. Smith
Giant Plated Lizard
A sight record on the escarpment south of Mahuwe.

Gerrhosaurus major major Duméril
Tawny Plated Lizard
Although not encountered during the survey, this large species has been recorded at Muzarabani West by Lauer (1989).

Gerrhosaurus nigrolineatus Hallowell
Black-lined Plated Lizard
Three specimens: Dande Safari Area NMZB 14949; Kasuo NMZB 15037; Mahuwe NMZB 15052.

Varanidae
Varanus niloticus (Linnaeus)
Nile Monitor
One specimen: Muzarabani West (Musengezi River) NMZB 9388*, where several were trapped by Lauer (1989); also a sight record at Kanyemba.

Varanus allbigularis albigularis (Daudin)
Savanna Monitor
One specimen: Ntumbe River NMZB 7679*. A decomposed specimen was seen at Kasuo and the species was recorded at Muzarabani West by Lauer (1989).

Amphisbaenidae
Zygaspis quadrifrons (Peters)
Kalahari Round-snouted Worm-Lizard
Five specimens: 20 km W of Mashumbi Pools NMZB 14887-8; Dande Safari Area NMZB 14951-3.

There are no records of the species from southeastern Zambia and it appears to be replaced by *Z. kafuensis* in the Lusaka area (Broadley & Broadley, 1997).

Monopeltis rhodesiana Broadley, Gans & Visser
Zimbabwe Wedge-snouted Worm-Lizard
One specimen: Muzarabani ZFML 51258*, recorded by Lauer (1989).

Monopeltis zambezensis Gans & Broadley
Zambezi Wedge-snouted Worm-Lizard
53 specimens: Dande Safari Area

NMZB 14954-91, 15001 + duplicates.

This fine series was uncovered by a grader widening the road south from Kanyemba and represents an eastern range extension of 110 km for the species. This species was previously known from only 10 specimens from the middle Zambezi Valley in Zimbabwe and Zambia. The data from this series were incorporated into the recent review of the *Monopeltis capensis* complex (Broadley, 1997). It is significant that *M. rhodesiana* was not found in the same area; the latter species may be restricted to alluvium along the Musengezi River.

Dalophia pistillum (Boettger)
Pestle-tailed Worm-Lizard
Three specimens: Dande Safari Area NMZB 14992-4.

This species has not previously been found sympatric with *Monopeltis zambezensis*.

Typhlopidae
Rhinotyphlops schlegelii mucruso (Peters)
Schlegel's Blind Snake
One specimen: Mururuzi Bridge NMZB 15284.

Leptotyphlopidae
Leptotyphlops longicaudus (Peters)
Long-tailed Worm Snake
One specimen: Dande Safari Area NMZB 14995.

Boidae
Python sebae natalensis A. Smith
Two specimens: Muzarabani West NMZB 9389*; Musengezi Bridge NMZB 14778*.

Viperidae
Bitis arietans arietans (Merrem)
Puff Adder
Three specimens: Muzarabani West NMZB 9390*; Musengezi Bridge NMZB 11142*; Kasuo NMZB 15038.

Atractaspididae
Atractaspis bibronii A. Smith
Bibron's Stiletto Snake
One specimen: 15 km S of Kanyemba NMZB 14923.

Amblyodipsas polylepis polylepis (Bocage)
Purple-glossed Snake
One specimen: Mashumbi Pools NMZB 15285.

Aparallactus lunulatus (Peters)
Reticulated Centipede-eater
One specimen: 10 km NNW of Mahuwe

Aparallactus capensis A. Smith
Cape Centipede-eater
Although not collected on the survey, this species has been recorded from Nyamurombwe on Lake Cabora Bassa east of Kanyemba.

Elapidae
Naja mossambica Peters
Mozambique Spitting Cobra
One specimen: Muzarabani West NMZB 9391*.

Dendroaspis polylepis (Günther)
Black Mamba
Two sloughed skins: Kanyemba NMZB-UM 9240*; Mahuwe NMZB 15066.

Colubridae
Lycophidion capense capense (A. Smith)
Cape Wolf Snake
Although not collected on the survey, this species has been recorded from

Muzarabani West by Lauer (1989).

Hemirhagerrhis nototaenia (Günther)
Bark Snake
Two specimens: Muzarabani West NMZB 8830*; Mashumbi Pools NMZB 10435*.

NMZB 8830 was swimming in the Musengezi River. This is now a monotypic species, as *H. viperina* (Bocage) has been reinstated as a full species (Broadley, in press).

Rhamphiophis rostratus Peters
Rufous Beaked Snake
Two specimens: Dande Safari Area NMZB 14999-15000.

An adult male and female exposed by the grader.

Psammophis subtaeniatus subtaeniatus Peters
Stripe-bellied Sand Snake
Sloughed skin: Kanyemba NMZB 15061; also a sight record 9 km west of Mashumbi Pools, and recorded from Muzarabani West by Lauer (1989).

Psammophis phillipsii (Hallowell)
Olive Grass Snake
Two specimens: Muzarabani West NMZB 11134*; Kanyemba NMZB 15062 (sloughed skin).

Psammophis angolensis (Bocage)
Dwarf Sand Snake
One specimen: Muzarabani West NMZB 9392*.

Natriciteres olivacea (Peters)
Olive Marsh Snake
One specimen: Kanyemba NMZB-UM 9253*.

Meizodon semiornatus semiornatus (Peters)
Semiornate Snake
One specimen: Kanyemba NMZB-UM 9244.

This headless specimen was recovered from the crop of a Lizard Buzzard (*Kaupifalco monogrammicus*).

Prosymna stuhlmanni (Pfeffer)
Eastern Shovel-snout
One specimen: Kanyemba NMZB 15005.

Philothamnus semivariegatus (A. Smith)
Variegated Bush Snake
A *Philothamnus* was seen, but not collected, at Mashumbi Pools. *Philothamnus semivariegatus* has been recorded from the Zambezi-Chewore confluence upstream from Kanyemba in the Chewore Safari Area (!529DB) and from Muzarabani West by Lauer (1989).

Crotaphopeltis hotamboeia (Laurenti)
Herald Snake
One specimen: Kasuo NMZB 15039.

Telescopus semiannulatus semiannulatus A. Smith
Eastern Tiger Snake
Although not collected on the survey, this species has been recorded at Nyamurombwe on Lake Cabora Bassa east of Kanyemba.

Thelotornis capensis oatesii (Günther)
Savanna Vine Snake
Two specimens: Mashumbi Pools NMZB 10436*; Mahuwe NMZB 15064 (a sloughed skin).

Crocodylidae
Crocodylus niloticus Laurenti
Nile Crocodile
Sight records from the Hunyani River near its confluence with the Dande. Crocodiles are present in all the major rivers in the area. Recorded from the Musengezi River and Dande Safari Area by Lauer (1989).

AMPHIBIA
Pipidae
Xenopus muelleri (Peters)
Müller's Clawed Frog
Five specimens: Mururuzi Bridge NMZB 15114-8.

Bufo gutturalis Power
Guttural Toad
One specimen: NMZB 9393*.

Bufo maculatus Hallowell
Flat-backed Toad
One specimen: Muzarabani West NMZB 9394*.

Bufo garmani Meek
Garman's Toad
11 specimens: Muzarabani West NMZB 9395*; Mashumbi Pools NMZB 15067, 15186-8, 15211-12; Kanyemba NMZB 15269; Dande Safari Area NMZB 151911; Kadzi Bridge NMZB 15217; Kasuo NMZB 15246; Mahuwe NMZB 15269.

Bufo beiranus Loveridge
Beira Dwarf Toad
Two specimens: 20 km W of Mashumbi Pools NMZB 15106; Kanyemba NMZB 15162.

These are the first records of this species from Zimbabwe; it was previously known from central Mozambique, southern Malawi and southern Zambia (Poynton & Broadley, 1988).

Schismaderma carens (A. Smith)
Red Toad
28 specimens: Mashumbi Pools NMZB 15068, 15144-5, 15236-41, and 20 km W NMZB 15107; Lower Dande River NMZB 15069-72, NMZB 15126; Mururuzi Bridge NMZB 15213-14; Kanyemba and 15 km S NMZB 15167, 15205-7; Kadzi Bridge NMZB 15218; Kasuo NMZB 15247; Mahuwe NMZB 15267-8, and 10 km NNW NMZB 15244; Gonomo NMZB 15276-7.

Microhylidae
Breviceps poweri Parker
Power's Rain Frog
Two specimens: Kanyemba NMZB 15184-5.

The species is new for Zimbabwe and the first record south of the Zambezi. Previously it was known only from north of the Zambezi in Zambia, southeastern Shaba Province of Congo-Kinshasa, Malawi and inland northern Mozambique (Poynton & Broadley, 1985).

Phrynomantis bifasciatus (A. Smith)
Red-banded Rubber Frog
Mashumbi Pools NMZB 10439*, 15082, 15129, 15142-3, 15222; 10 km NNW of Mahuwe NMZB 15244.

Ranidae
Pyxicephalus sp.
Bullfrog
Seven juvenile specimens: Mashumbi Pools NMZB 15104; Mururuzi Bridge NMZB 15127-8; Kanyemba 15189; Dande Safari Area NMZB 15193; Kadzi Bridge NMZB 115215-6.

These specimens cannot be assigned to either species and although *P. edulis* was the species expected to occur, Channing *et al.* (1994) have reported

sympatry between *P. adspersus* and *P. edulis* in central Mozambique.

Tomopterna cryptotis (Boulenger)
Tremolo Sand Frog
16 specimens: Mashumbi Pools NMZB 15066; Mururuzi Bridge NMZB 15120, 15123; Kanyemba NMZB 15165-6, 15177-8, & 15 km S NMZB 15160-1, 15124-5; Dande Safari Area NMZB 15192, 15204; Mahuwe NMZB 15264, 15273, 15275.

Tomopterna marmorata (Peters)
Russet-backed Sand Frog
14 specimens: Muzarabani West NMZB 11127*; Mururuzi Bridge NMZB 15121-2; Kanyemba NMZB 15179-80; Kadzi Bridge NMZB 15219; Kasuo NMZB 15251-2, 15254; Mahuwe NMZB 15259-62, 15274.

Ptychadena anchietae (Bocage)
Plain Grass Frog
11 specimens: Kanyemba NMZB-UM 9241*, NMZB 15172, 15174, & 15 km S NMZB 15155; Muzarabani West NMZB 9396*; Musengezi Bridge NMZB 11114*; Mururuzi Bridge NMZB 15112-3; 10 km E of Mukanga Bridge 15135; Kasuo NMZB 15248-9.

Ptychadena mossambica (Peters)
Mozambique Grass Frog
26 specimens: Muzarabani West NMZB 11128; Mashumbi Pools NMZB 15065, 15150-1, 15229-36; Lower Dande River NMZB 15073-8; Mukanga Bridge NMZB 15139; Kanyemba NMZB 15164, & 15 km S NMZB 15156-9; Dande Safari Area NMZB 15152-3, 15194.

Phrynobatrachus natalensis (A. Smith)
Natal Puddle Frog
Seven specimens: Muzarabani West NMZB 11132*; Lower Dande River NMZB 15079; Mururuzi Bridge NMZB 15108-11; 10 km E of Mukanga Bridge NMZB 15136.

Phrynobatrachus mababiensis Fitz-Simons
Dwarf Puddle Frog
14 specimens: Kanyemba NMZB-UM 9242*; NMZB 15172-3; Mashumbi Pools NMZB 15085-6, 15140-1, 15242-3; 10 km E of Mukanga Bridge NMZB 15137; Kadzi Bridge NMZB 15220; Kasuo NMZB 15225; Gonono NMZB 15282-3.

Arthroleptis stenodactylus Pfeffer
Shovel-footed Squeaker
18 specimens: Muzarabani West NMZB 11129-31*; Musengezi Bridge NMZB 11243; Lower Dande River NMZB 15081; Mashumbi Pools NMZB 15083-4; Mururuzi Bridge NMZB 15119; Mukanga Bridge NMZB 15138; Kanyemba NMZB 15175-6; Mahuwe NMZB 15244-6, 15270-2.

Rhacophoridae
Chiromantis xerampelina Peters
Southern Foam-nest Frog
Six specimens: Kanyemba NMZB-UM 9243*, NMZB 15190; Mashumbi Pools NMZB 10437-8, 15221; Kasuo NMZB 15256.

Hyperoliidae
Kassina senegalensis (Duméril & Bibron)
Bubbling Kassina
12 specimens: Mashumbi Pools NMZB 15105, 15149; 15 km S of Kanyemba NMZB 15168-70, 15209-10; 10 km NNW of Mahuwe NMZB 15250; Gonono NMZB 15278-81.

Hemisotidae
Hemisus marmoratus marmoratus (Peters)
Mottled Shovel-nosed Frog
29 specimens: Mashumbi Pools NMZB 15088-96, 15098-103, 15130-1, 15146, 15225-8; 10 km E of Mukanga Bridge NMZB 15133-4; Kanyemba NMZB 15181, & 15 km S NMZB 15163, 15208; Dande Safari Area NMZB 15202-3.

20 juvenile *Hemisus* were collected in pitfall traps at Mashumbi Pools; two of these have faint pale vertebral lines and have been tentatively assigned to *H. g. broadleyi*.

Hemisus guineensis broadleyi Laurent
Broadley's Shovel-nosed Frog
15 specimens: Mashumbi Pools NMZB 15087, 15097, 15223-4; Kanyemba NMZB 15182-3, & 15 km S NMZB 15154; Dande Safari Area NMZB 15195-201.

All these specimens are dark, with a marbled pattern and a thin pale vertebral line. The series from Dande Safari Area, including some large adults, was uncovered by the grader widening the road; all the specimens collected elsewhere are subadults.

ACKNOWLEDGEMENTS

We thank CIRAD-EMVT for funding this herpetological survey as part of their Middle Zambezi Biodiversity Project and for giving permission for the publication of this report.

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APPENDIX

List of localities with quarter-degree references.

Dande Safari Area	1530CD
Gonono	1630BB
6 km W of Gwase flygate	1630BA
Kadzi Bridge	1630BB
Kanyemba	1530CB
15 km S of Kanyemba	1530CD
Kasuo	1630BD
Lower Dande River	1630BA
Mahuwe, 7 10 km NNW	1630BC
Mana-Angwa Camp (Chewore Safari Area)	1630AA
Marirangwe Range	1630AA
Mashumbi Pools	1630BA
9 & 20 km W of Mashumbi Pools	1630AB
Mukanga Bridge, & 10 & 18 km SE	1630AA
Mururuzi Bridge	1630AB
Musengezi Bridge	1630BD
Muzarabani West (Musengezi River)	1630BD
Ntumbe River (Chewore Safari Area)	1630AA
Nyamurombwe, Zumbo District, Mozambique	1530DA
Zumbo, Mozambique	1530CB

FISK'S HOUSE SNAKE (*LAMPROPHIS FISKII* BOULENGER) FROM THE PRINCE ALBERT AREA: A CORRECTION

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In a recent paper on the fauna and flora of the Tierberg study site, near Prince Albert, in the southern Karoo (Milton, Dean & Kerley 1992), we listed Fisk's House Snake *Lamprophis fiskii* as occurring on the site. Fisk's House Snake is extremely rare and is only known from approximately 12 specimens collected from scattered localities in the western Karoo, including a recent record from Beaufort West (Branch & Haagner 1992). It is thus likely that Fisk's House Snake could occur in the Prince Albert area. However, Dr W. R. Branch of the Port Elizabeth Museum has informed us that the snake we observed and listed (and photographed, but did not collect) was incorrectly identified, and was in fact a Dwarf Beaked Snake *Dipsina multimaculata* (W. R. Branch, *in litt.* August 1993).

It is opportune, in view of the growing interest in snake biogeography and biology, to point out that our record of Fisk's House Snake from Tierberg is based on a misidentification, and that there is still no positive record of its occurrence in the Prince Albert area.

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UNUSUAL FEEDING BEHAVIOUR OF THE COMMON ROUGH-SCALED LIZARD (*ICHNOTROPIS SQUAMULOSA*) IN CAPTIVITY

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The Rough-scaled Lizard, *Ichnotropis squamulosa*, is a small-headed, medium-sized lizard that is an active hunter of the sandy areas in the arid and mesic savannah (Branch 1994). The diet consists mainly of termites, but grasshoppers, beetles and other insects are also taken. These lizards grow rapidly and are known as "annuals"; it is unusual for an individual to live longer than 13 to 14 months. The females die soon after laying 8 - 12 eggs during April and May.

The habitat of *I. squamulosa* is shared with a few other lacertids of more or less similar size, resulting in competition for food (Jacobsen 1987).

Six adult specimens of the Common Rough-scaled Lizard were caught in traps in the Molopo Nature Reserve (25o 40'S, 22o 49'E) in the North-West Province, South Africa. They were brought to the laboratory in Pretoria and kept in a 140 x 34 x 33 cm terrarium together with six subadult Bushveld Lizards, *Heliobolus lugubris*, and four adult Kalahari Tree Skinks, *Mabuya spilogaster*, which were captured at the same locality. The bottom of the terrarium was partly covered with sand and partly with gravel, and a few stones and twigs were placed inside. Heat and light were supplied by a 100 W bulb which was installed on top of the tank. The animals were fed once a day with

insects, mostly grasshoppers, caught on the university campus.

Two instances of cannibalism were observed in a period of three days. In the first case an *I. squamulosa* was seen feeding on a *H. lugubris* which was swallowed within 90 seconds. Two days later the same *Ichnotropis* was found dead with the posterior part of the *H. lugubris* protruding from the mouth, indicating an unsuccessful attempt at regurgitating the prey.

Three days later a female *I. squamulosa* was seen chasing after a *H. lugubris*. The Bushveld Lizard was caught several times by one of its legs, held for a while and then released again. After about five minutes the *Heliobolus* was caught at midbody and was vigorously shaken, which caused its head to repeatedly strike a stone. This lasted for about two minutes. The by now subdued *H. lugubris* was then turned and swallowed head-first, which took about five minutes. It is worth mentioning that shortly before this event happened, the *I. squamulosa* was offered a few grasshoppers which were not taken. Two days later the regurgitated carcass of the *H. lugubris* was found in the terrarium.

Jacobsen (1987) stated that there was some competition for food between the two South African species of *Ichnotropis* as the size difference between them is rather small. The adults of *H. lugubris* and *I squamulosa* are also quite similar in size, the former reaching a maximum length of 22 cm and the latter 23 cm (Branch 1994). both these lizards favour the same kind of habitat which (although not reported in the literature) could lead to competition for food that might result in aggressive display or action between similarly sized individuals.

In this particular case, the *H. lugubris* specimens (that were seen to be eaten) were smaller than the *I. squamulosa* and may therefore have appeared like attractive prey. It is also possible that because of the close confinement in the terrarium, this might have provoked the *I. squamulosa* to attack the *H. lugubris* which had no place to escape.

Nevertheless the observed behaviour could be an indication of the competition between *I. squamulosa* and other lacertids in their natural environment (Jacobsen 1987; Broadley 1979).

ACKNOWLEDGEMENTS

Special thanks to Mr. Richard (Nissan) Newbery for providing the lizards, and the Arthur & Aenne Feindt Foundation (Hamburg) for their financial support.

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LIFE HISTORY NOTES

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

A standard format is to be used, as follows: **SCIENTIFIC NAME; Common name** (using Bill Branch's *Field Guide to the Snakes and other Reptiles of Southern Africa*, 1988, for reptiles; and Passmore & Carruthers' *South African Frogs*, 1995, for amphibians, as far as possible); **KEYWORD** (this should be one or two words best describing the topic of the note, *e.g.* Reproduction, Avian predation, *etc.*); the **Text** (in concise English with only essential references quoted and in abbreviated form); **Locality** (country, province or state, location, quarter-degree unit, and latitude and longitude if available; elevation above sea level; use metric units); **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.

ANURA

PIPIDAE

KASSINA SENEGALENSIS
Bubbling Kassina
REPRODUCTION, CLUTCH SIZE

During the 1991 rainy season (October to December) 12 *Kassina senegalensis* pairs were caught in amplexus at Bloemfontein, Free State (29o 05' 30"S, 26o 11' 10"E; 2926AA) and brought to the laboratory to complete the egg laying process. All the pairs were collected before egg laying started. The average size of the clutches was 316.92 (n = 12; SA = 87.26). The smallest clutch contained 128 eggs, while the two biggest clutches contained 426 and 464 eggs respectively. During the 1992/1993 breeding season two clutches of 484 and 504 eggs respectively were collected at the Vernon Crookes Nature Reserve, southern KwaZulu Natal (30o 15'S, 30o 37'E; 3030BC). According to Wager (1986, *Frogs of South Africa: their fascinating life stories*, Delta Books, Goodwood) and Duellman and Trueb (1994, *Biology of Amphibians*, Johns Hopkins University Press, London), who refer to Wager, the largest recorded clutch size for *K. senegalensis* is 400 eggs. The Vernon Crookes record extends the known clutch size record for *K. senegalensis* by 104 eggs.

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REPTILIA

SAURIA

GEKKONIDAE

PTENOPUS GARRULUS GARRULUS
Common Barking Gecko
BURROW STRUCTURE

The burrow structure of this species was described by FitzSimons (1943, *The Lizards of South Africa*, Transvaal Museum Memoir No. 1: 13) who stated that the depth reached was "a foot to eighteen inches (30-45 cm)", while later investigations only encountered burrows up to a depth of 35.5 cm (Haacke, 1975, *Ann. Transvaal Mus.*, 29(12): 217). In general terms these observations seem to apply and even side branches from the main tunnel do not normally go deeper than either. As it often happens, when digging up *Ptenopus* burrows, one loses the tunnel roughly at that depth and gives up the search. However, on two occasions, considerably deeper burrows have been encountered.

(a) TM 69071, adult male, svl = 48 mm, tail = 33 mm, Van Zylsrust, Kuruman District (2622BB, 26°53'S, 22°03'E), coll. H. Kubierske, 6 April 1990. Greatest depth of burrow in red Kalahari sand reached just over 80 cm.

(b) TM 80582, adult female, svl = 54 mm, tail = 36 mm, farm Sweethome, 315 Bochum district, Northern Province (2328BB), coll. F. Hulbert, 29 December 1996. The main part of this burrow and its side branches did not descend below about 40 cm. Ready to abandon the attempt, a steeply descending tunnel was found and followed until its occupant was found at the end of it. Greatest depth in red Kalahari sand reached between 100 and 110 cm. After heavy rains at that time the sand was moist to beyond this depth. The possibility exists that exceptionally heavy rain episodes might cause these geckos to tunnel deeper than usual in an attempt to reach dryer levels. In both the above cases the great depth was not anticipated and the surface level was not established before commencing the excavation. When finally measuring it, the level of the original entrance could not be defined with absolute certainty.

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

SERPENTES

ELAPIDAE

HEMACHATUS HAEMACHATUS
Rinkhals
ARBOREAL BEHAVIOUR

Two instances of arboreal behaviour in *Hemachatus haemachatus* were observed at No. 10, Trevallyn Smallholdings, Randburg, Gauteng (2627BB).

On 22 February 1998, at about 12h00, my attention was drawn by the alarm calls of several birds to a Jacaranda tree. An adult Rinkhals about 1100 mm in length was seen in the topmost branches, approximately 10 metres above ground level. Having become aware of me, it remained motionless for a few minutes before descending quickly and competently to the ground, and then moving off into the adjacent grassveld. No birds nests or other obvious food source could be found in the tree.

The second case was more interesting and of longer duration. My father came across a large Rinkhals (about 1300 mm in length) on the lawn next to the house one day in November 1989. The snake moved into the cover of a Jasmine creeper and could not be found despite a good search. The creeper grew upwards into a larger creeper (*Bignonia cherere*) which had been trained to grow under the eaves on the north side of the house. A few days later the same snake was seen in the Bignonia creeper and when disturbed, it quickly moved into the space between the roof and the ceiling. This explained the strange noises that my father had heard on and off for several weeks - the snake was using the roof as a semi-permanent home. It was soon discovered that the snake would climb down from the roof via the creeper (a height of approximately three metres) and move off under cover of some garden shrubs into the adjacent veld and return by the same route, usually in the afternoon. On very hot days the roof became unbearably hot and the snake was forced to crawl out of the roof into the shade of the creeper. It was due to this behaviour that we discovered that there were in fact at least three adult Rinkhals in the roof. The original snake, and two slightly smaller ones (about 1100 m long), were all seen together in the creeper at one time or another.

After months of tolerating these reptiles my father, who had never before felt troubled by their presence, decided that they should be removed for the sake of visitors and the grandchildren. Accordingly we removed them in early April 1990.

Submitted by: **A.G. LIEBENBERG** (P.O. Box 26, Honeydew 2040, South Africa).

NAJA NIVEA
Cape Cobra
SIZE

On 23 September 1997 a very large male *Naja nivea* was brought into the Port Elizabeth Snake Park after having been killed in open veld next to smallholdings in Bushy Park, Port Elizabeth, Eastern Cape Province (34°02'S, 25°25'E; 105 m asl; 3425BA). The habitat is disturbed Mesic Thicket (previously called Valley Bushveld), now extensively cleared for cattle pasture. The snake measured 1510 + 290 = 1800 mm, and weighed 1300 g. It was of the typical local colour phase, i.e. a yellow-orange dorsum heavily flecked with irregular dark brown flecks, ventrum paler with a few brown flecks. The specimen is presently frozen, pending future dissection and preparation of skeletal material. It will then be deposited in the Port Elizabeth Museum (PEM) herpetological collection.

This specimen is slightly exceeded in size by an adult female (PEM R 6441) collected on October 1988, 5 km from Aus on the road to Helmeringhausen, southern Namibia (2616CB). When freshly dead it measured 1552 + 315 = 1867 mm and weighed 1248 g. It had a uniform dark mahogany dorsum, slightly paler on the ventrum which had scattered irregular darker brown flecks. The habitat was arid Nama Karoo with numerous rocky outcrops.

For Cape Cobra size FitzSimons (1962,

Snakes of Southern Africa, Purnell and Sons, Cape Town, 423 pp.) records "Average length of adults from 4½ t6 5½ feet, but known to sometimes reach 6½ feet and occasionally as much as 7 feet." However, he lists the greatest recorded maximum size as only 1442 + 273 = 1715 mm for an unsexed specimen from Selborne, near Addo, Eastern Cape Province. In the revision of this monograph, Broadley (1990, *FitzSimons' Snakes of Southern Africa*, rev. ed., Delta Books, Johannesburg, 386 pp.), converts these sizes to approximate metric equivalents "Average length of adults 1.5 m, but known to sometimes reach 2 metres or more.", whilst still listing the same maximum size for the Selborne specimen.

Experience in the Cape Province shows that the Cape cobras are usually smaller than stated by FitzSimons (1962), and average about 1.2 - 1.4 m with only exceptional specimens exceeding 1.6 m. The Bushy Park and Aus specimens appear to be the largest recorded for either sex for the species, exceeding FitzSimons' Selborne specimen (PEM 1381/13; now accessioned as PEM R 1171), which is an adult male.

The largest size recorded for specimens from the Free Sate Province (Bates, 1992, *The herpetofauna of the Orange Free State - with special emphasis on biogeographical patterning*, unpubl. M.Sc. thesis, Univ. Natal, 420 pp.) are: male 1466 + 248 = 1714 mm (Albion) and female 1275 + 225 = 1500 mm (Beginseldam).

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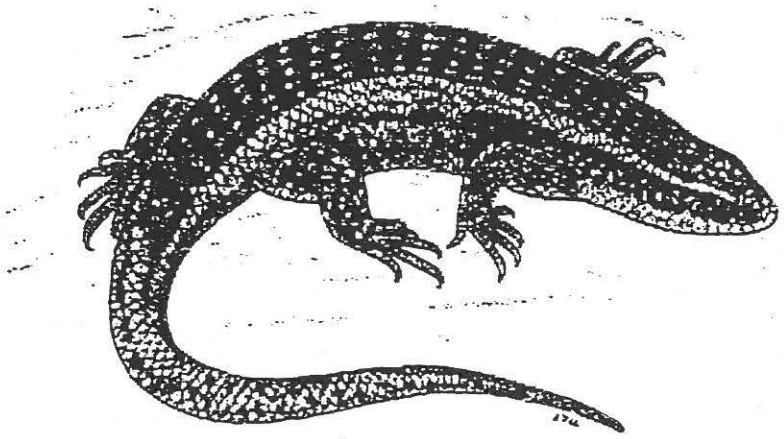

GEOGRAPHICAL DISTRIBUTION

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

A standard format is to be used, as follows: **SCIENTIFIC NAME; Common name** (for sources, see Life History Notes); **Locality** (country, province or state, location, quarter-degree unit, and latitude and longitude if available; elevation above sea level; use metric units); **Date** (day, month, year); **Collector(s); Place of deposition and museum accession number** (required); **Comments** (including data on size, colour and taxonomic characters, e.g. scalation, webbing, especially for taxonomically problematic taxa; and nearest published locality record(s) in km; references to be quoted in the text). Submitted by: **NAME**, Address (in parentheses).

Records submitted should be based on specimens deposited in a recognised institutional collection (private collection records are discouraged).

New South African province names must be used.

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

REPTILIA

SAURIA

GEKKONIDAE

PTENOPUS GARRULUS GARRULUS (A. Smith, 1849); Common Barking Gecko; South Africa, Northern Province, Farm Sweethome, 315 Bochum District (2328BB, 23°13'S, 28°51'E); 29 December 1996; Transvaal Museum, TM 80582, adult female, svl = 54 mm, t = 36 mm, F. Hulbert; and TM 80583, adult female, svl = 54.5 mm, t = 36 mm, W.D. Haacke. This record fills the gap of one and a half degrees or 150 km in the presently documented range of the former Transvaal (N.H.G. Jacobsen, Dec. 1989, *A herpetological survey of the Transvaal*: 88, map 1, unpublished Ph.D. thesis, University of Pretoria) between the records from Soutpan 2229CD and north of the Soutpansberg, and the single record from Limpopodraai (2327BA) near the Botswana border. Found in bushveld savannah on deep Kalahari sand with low granite outcrops, due south of the Blouberg mountain complex. In general the vegetation appeared to be too dense for the occurrence of *Ptenopus*, but during the previous evening some calls of male geckos were heard from more open ground of a former mielie land. Two burrows were marked when the occupants eyeshine was located by means of a spotlight and a female was excavated from each during the following morning.

Submitted by: **W.D. HAACKE** (Department of Herpetology, Transvaal

Museum, P.O. Box 413, Pretoria 0001, South Africa).

COLOPUS WAHLBERGI WAHLBERGI Peters, 1869; Kalahari Ground Gecko;

(a) Botswana, Ngamiland district, near the southern tip of Linyati Swamp (1823DA); November 1973; D. Dandridge; Transvaal Museum, TM 45985. Adult male, svl = 57 mm, tail lost. Locus indicated in Haacke, 1984, *Koedoe* Suppl., fig. 2.

(b) Botswana, Ngamiland district, Tsodilo Hills (1821DD; 18°45'19"S 21°45'41"E); 19 April 1995; M. Barts; Transvaal Museum, TM 81100. Adult male, svl = 46 mm, t = 39 mm.

(c) Botswana, Ngamiland district, 12 km S of Toteng on the Ghanzi road (2022BD; 20°16'S 22°55'E); M. Barts; Transvaal Museum, TM 59756 & 59797, both juveniles.

(d) Namibia, Western Caprivi Strip, Katima Mololo district, near W bank of the Kwando River, S of Kongola bridge (1723BD; 17°52'S 23°19'E); 13 April 1997; E. Erb; Transvaal Museum, TM 81099. Juvenile, svl = 30 mm, t = 28 mm.

The published distribution maps for this taxon (Haacke, 1976, *Ann. Transvaal Mus.* **30**(3):39, fig. 1; and Auerbach, 1987, *The Reptiles and Amphibia of Botswana*, Mokwepa Consultants: 90) indicate a northern range limit within Botswana at about 21°30'S while in Namibia it reaches the Angolan border, well into the 500+ mm average rainfall zone. A single record for this higher rainfall zone in Botswana had already been shown in 1984 (Specimen a, above) (Haacke, 1984, *Koedoe* Suppl.: 174, fig. 2). Since then two records from Zimbabwe (Victoria Falls 1725DD, Broadley & Spawls, 1991, *J. Herpetol. Assoc. Africa* **39**:19; and 5 km SW of Dotama Pan 1924CD, Broadley & Rasmussen, 1995, *Afr. Herp News* **22**:52) extended the known range considerably to the north-east across the border into western Zimbabwe, but still leaving northern Botswana practically vacant.

The above listed records in the Transvaal Museum indicate that this gecko is widespread all over northern and in fact over most areas of Botswana with a sandy substrate and actually extends into the Western Caprivi Strip, Namibia, from where a recent initial investigation was unable to prove its presence (Haacke, 1996, *Afr. Herp News* **25**: 29-33). It is obvious that the northern range limit extends well into Angola and it is very likely that this species will also be found in SW Zambia.

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SCINCIDAE

ACONTIAS MELEAGRIS MELEAGRIS (Linnaeus, 1758): Cape Legless Skink; South Africa, Western Cape Province; two localities.

(a) Laaiplek, Vredenburg district (3218CC, 32°47'S, 18°09'E); 23 February 1997; N.J.L. Heideman, B.A. Wilson, M.G.J. Hendriks, N. Don & C. Moses; National Museum, Bloemfontein, NMB R7511-7512 (under tins, about 10 m apart), R7516-7517 (under lawn cuttings).

(b) Farm Draai Hoek (10), Piketberg district (3218AD, 32°28'S, 18°20'E); 24 February 1997; collectors as above; NMB R7513-7515, found under sheet metal in kraal.

Specimens were dark and unstriped dorsally, and measured 161-211 mm snout-vent length. Together with three quarter-degree loci (3217DD, 3318AA, 3218BB) plotted on the map in Visser (1984, *Landbou Weekblad*, 14 September 1984, pp. 72-73, 75-77) these are the most westerly localities for the species. The nearest locality plotted by Broadley & Green (1969, *Arnoldia [Rhodesia]*, 4[26]: 1-29) is in locus 3318BC.

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SERPENTES

VIPERIDAE

BITIS GABONICA GABONICA (Duméril & Bibron, 1854): Gaboon Viper; Malawi, Northern Region, Kaningina Forest Reserve, east of Mzuzu (11°31' S, 34°07' E; 1134CA; 1360m a.s.l.); November 1994; L. Chinula; Natural History Museum of Zimbabwe, NMZB 14552.

Kaningina Forest Reserve is predominantly *Brachystegia* woodland with areas of wetter forest. Although recognised as occurring in Malawi (Mitchell, 1950, *Nyasaland J.* **3**(2):46-57; Sweeney, 1961, *Snakes of Nyasaland*. The Nyasaland Society and the Nyasaland Government, Zomba) *Bitis g. gabonica* appears to be unknown in the country. Those given by Johnston (1897, *British Central Africa*. Methuen & Co., London) came, as indicated by Loveridge (1953, *Bull. Mus. Comp. Zool.* **110**(3):143-322), from portions of British Central Africa that are today part of Zambia, not Malawi. While no specimens were known, there was reference to skins of *Bitis g. gabonica* from the Mzuzu area (Mitchell, 1950). Sweeney (1961) discusses several additional records from around Mzuzu and the nearby Viphya, and Dr. D.G. Broadley (*in litt.*) had seen the skinned head of one in a collection of snakes at Nkhata Bay Secondary School, east of Mzuzu.

Data for the specimen are as follows: Juvenile male measuring 420+42 mm; 133 ventrals; 31 pairs of subcaudals; 36 mid-body scale rows; anal entire.

Acknowledgements: I would like to thank Mrs. Kathrein Hüttner for making available the specimen, Dr. Klim Hüttner for the locality coordinates and Dr. D.G. Broadley for reviewing a draft of this note and providing the museum cataloguing data.

Submitted by: **D.P. CRITCHLOW** (Ontario Ministry of Natural Resources, P.O. Bag 2002, Concession Road, Kemptville, Ontario, K0G 1J0, Canada).

CHELONIA

PLEURODIRA

PELOMEDUSIDAE

PELOMEDUSA SUBRUFA (Lacépède, 1788): Marsh Terrapin; South Africa, Free State, Frankfort district. Two localities:

(a) Farm Inhoek (2728AD, 27°25'S, 28°30'E; 1550 m a.s.l.); 2 October 1997; F. BOurgers; National Museum, Bloemfontein; NMB R 8036. Collected at 09h00 on gravel road while crossing it close to the R26 road between Frankfort and Tweeling.

(b) Farm Erfhoek (2728BC, 27°19'S, 28°45'E; 1600 m a.s.l.); 10 October 1997; J. van Aardt; NMB R8037. Collected at 14h00 while crossing the R34 road between Frankfort and Vrede about 2 km west of the N3 highway.

These records confirm the occurrence of *P. subrufa* in the north-eastern Free State (Van Wyk, 1997, *African Herp News* 26: 31), from which area they had not previously been recorded despite extensive surveys (De Waal, 1980, *Navors. nas. Mus., Bloemfontein* 4(3): 85-91; Bates, 1992, *The Herpetofauna of the Orange Free State - with special emphasis on biogeographical patterning*, M.Sc. thesis, University of Natal, Durban, 429 pp).

Submitted by: **J.C.P. van WYK** (P.O. Box 16, Frankfort 9830, South Africa).

BOOK REVIEW

Veterinary Management of Tortoises and Turtles
Stuart McArthur, 1996. ISBN: 0-632-04059-9 (soft cover). Blackwell Science, Oxford.
170 pp., 37 colour photos, 2 b/w photos, 23 drawings, *f* 80,- ([The Netherlands], from which a part will be donated to the British 'Tortoise Trust').

Although the number of good quality books on captive reptiles and amphibians has grown considerably during past years this has not, comparatively, been the case with respect to the number of published books on diseases in this group of animals. Therefore, the appearance of a new book on this subject in 1996 was most satisfactory to me. The book deals with diseases of tortoises and terrapins. It deals principally with species that are commonly kept in captivity in England, such as *Testudo hermanni*, *T. horsfieldi*, *T. marginata*, *T. graeca*, *Terrapene* spp, *Kinixys* spp, *Pseudemys* (*Trachemys* (SL) *scripta elegans* and *Emys orbicularis*. It must be emphasised that most descriptions will be applicable to other species as well. It is questionable whether *Kinixys* really is often kept in captivity in England.

The book was written in cooperation with veterinarians and tortoise and terrapin keepers, thus preventing the usefulness of information for one group from excluding it for the other. Neither purely theoretical information, impractical for the chelonian keeper, is presented; nor is there an excess of information on healthy chelonians, which would have made the book too superficial for use in case of problems with diseased animals. With respect to the contributors of the book, the name of Andy Highfield probably will be familiar to many chelonian keepers. Except for the cooperation mentioned above, the book is a combination of relevant data from over 100 scientific articles published since circa 1957, and referred to in the text.

After a brief preface and acknowledgements, the book is divided into 24 unnumbered chapters. In my opinion, the chapters could better have been divided into sections within fewer chapters. The first three chapters deal with overall information such as anatomy, important characteristics when assessing the health of a chelonian, and handling. Throughout the book, descriptions in the text are illustrated by numerous photos and drawings (among others, weighing / measuring, injecting, and force-feeding by means of a catheter). Furthermore, the main information is summarised in tables. The fourth and fifth chapters deal in detailed with hibernation and with problems that can occur. The sixth and seventh chapters discuss feeding and nutritional deficiencies. In these chapters a distinction is made between feeding habits both in nature and in captivity, in the different species of tortoises and terrapins referred to above. In the author's view (and mine for that matter) the protein-rich food so often

supplied by tortoise owners (cat and dog food!) should be banned from the diet completely. Also beans must be considered to be food with too much protein. The problems that are likely to occur when feeding too much protein are demonstrated by means of photos of sections of the shell, showing internal deformaties. More convincing might be the descriptions and illustrations of the effects of protein-rich diets on the renal system (photos of tortoises with an oedematous appearance are shown). Additionally, changes in the ratio between shell length and body mass are mentioned.

In the next seven chapters the author describes external or internal infections such as ticks, worms, fungi, protozoa, etc. In chapter eight, causes and treatment of diarrhoea are presented. In all types of infections, symptoms are described, together with possible remedies These are given in excellent tables listing the therapeutic substance, trade name, manufacturer and dosage. The methods of administering medicines are also dealt with. (The final chapter of the book gives an overview of all drugs mentioned in the book, together with information on dosage and in some cases a reference.)

Chapters 9 to 12, 15 and 16 will be less useful (although as interesting) to most tortoise and terrapin keepers, describing anaesthesia, surgery, radiography and euthanasia. In chapters 13 and 14, captive reproduction and specific problems (such as egg-binding) are considered, after which the main requirements of the species most commonly kept in captivity are given. In my opinion, information such as the size of an enclosure and prevailing temperature depend heavily on the keeper.

In conclusion, this book must be recommended to all serious chelonian keepers. Although the book has primarily been written in order to inform veterinarians with respect to management of tortoises and terrapins, the author succeeded in making the book practical for non-veterinarians as well. The use for the chelonian keeper seems twofold; on one hand the book can help to prevent diseases by giving rational suggestions for feeding, providing of supplements and hibernation. On the other hand, the book can help the curator to make a diagnosis and to find an appropriate remedy in case of diseases, although possibly a veterinarian will be necessary in order to make a final diagnosis by means of (for instance) microscopic examination. In cases when a veterinarian without experience of chelonians is asked for advice, it might be useful to show him the book.

The price of the book could be a problem, not because it is particularly high for the quality, but because most terrarium keepers seem to prefer to pay a high price for a book with many glossy photographs than for a book on diseases. That is a pity, because in my opinion books such as this can definitely to the successful keeping and breeding of tortoises and terrapins in captivity.

Reviewed by: **VICTOR LOEHR**
(Nipkowplein 24, 3402 EC IJsselstein, The Netherlands)

(This review was originally published in Dutch in *Lacerta* 55(4): 182-183. The translation by Victor Loehr was edited by the Newsletter editor.)

HERPETOLOGICAL BOOKS

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THE OSTEOLOGY OF THE REPTILES
A.S. Romer
September 1997
0-89464-985-X Revised Edition

Based on the work of Samuel Wendell Williston and Dr. W.K. Gregory, author and editor of the original title published in 1925, this volume consists of two major parts - a structure-by-structure account of the reptile skeleton, followed by a classification of the various reptile groups based on osteological characters. This update is designed to give, in outline form, an account of the nature of the skeletal system of numerous reptile types both living and extinct. Changes in classification since Romer's day have been added in an easy-to-understand table.

AMPHIBIANS AND REPTILES OF MADAGASCAR, THE MASCARENES, THE SEYCHELLES AND THE COMOROS ISLANDS
F.-W. Henkel and W. Schmidt
Translated from the German by J. Hackworth
1-57524-0149-9 English Edition
February 1998

With their unique flora and fauna, Madagascar and the surrounding islands of the Indian Ocean are some of the most interesting vacation destinations for nature lovers, herpetologists and amateur reptile and amphibian keepers. This work describes the climate and vegetation of the area, as well as many of the resident reptiles and amphibians and contains valuable information on the husbandry of most species. There are 240 descriptions with colour photos of each to aid in identification of these animals.

THE TRUE VIPERS Biology and Toxinology
David Mallow and David Ludwig
0-89464-877-2
New edition April 1998

A comprehensive, detailed reference work on the nine genera and their species in the subfamily Viperinae. Each species account is based on a thorough review of the world literature, and includes information on ecology, biology, physiology, toxinology, distribution, behaviour and husbandry. This book is a valuable reference for professional and amateur herpetologists, for ecologists and environmental scientists, for educators, and for keepers and breeders. The text is supplemented by over 40 colour plates and distribution maps and includes an extensive bibliography.

REPTILE KEEPER'S HANDBOOK
Susan M. Barnard
0-89464-933-7
April 1996

Written by a professional zoo keeper, this handbook provides the reader with a practical "hands-on" approach to the husbandry of reptiles, including venomous snakes. The wide variety of topics is presented in a manner that enables the reader to obtain information quickly. Subjects include nomenclature, taxonomy, physiology, anatomy, selection of species, transporting, handling, housing, hygiene, feeding, nutritional disorders, maintenance of insect colonies, health, medical and necropsy considerations, reproduction and egg incubation. It includes tables on the origin, climate, habits, habitats, adult sizes and food preferences of all the reptilian genera.

HERPETOLOGICAL ASSOCIATION OF AFRICA

FINANCIAL STATEMENTS
for the year ended 28 February 1998

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

Chairman

Treasurer

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

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

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

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

Except for the effects of any adjustments which might have been necessary had it been possible for us to extend our examination of cash collections, in our opinion these financial statements fairly presents the financial position of the Herpetological Association of Africa at 28 February 1998 and the results of its operations for the year then ended.

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

HERPETOLOGICAL ASSOCIATION OF AFRICA

BALANCE SHEET - 28 February 1998

	Note	1998	1997
Funds Employed			
Accumulated funds			
Balance at beginning of year		63,225	51,530
Net (defecit) surplus for the year		(13,645)	11,696
		49,580	63,225
Employment of funds			
Current assets			
UBS - Bloemfontein		0	109
UBS - Durban		9,471	29,900
Standard Bank - Bloemfontein		21,628	20,403
Volkskas - Durban		18,881	13,899
Cash on hand		0	0
		49,980	64,311
Less :			
Current liabilities			
Accounts payable		400	1,085
		400	1,085
Net current assets		49,580	63,225

INCOME STATEMENT
for the year ended 28 February 1998

	1998	1997
Income		
Interest	6,626	6,860
Donations	705	0
Sale of journals	1,730	1,631
Subscriptions	16,783	18,054
	25,844	26,545
Expenses		
Audit fees	400	800
Proceedings	14,114	0
Journals	17,891	7,647
Newsletters	4,129	3,940
Bank charges	27	7
Office expenses	2,929	2,456
	39,489	14,849
Net (deficit) surplus for the year	(13,645)	11,696

HERPETOLOGICAL ASSOCIATION OF AFRICA
MEMBERSHIP FEES AS AT 1 JANUARY 1998

AFRICAN MEMBERSHIP

ORDINARY MEMBERSHIP
1 year membership **R60.00**. Submit in Rand or equivalent U.S. Dollar plus 10%.
3 year membership **R160.00**. Submit in Rand or equivalent U.S. Dollar plus 10%.

SCHOLARS MEMBERSHIP
1 year membership **R40.00**. 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 **R120.00**. Submit in ZAR or Rand by bankers draft or money order.
3 year membership **R320.00**. 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
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.