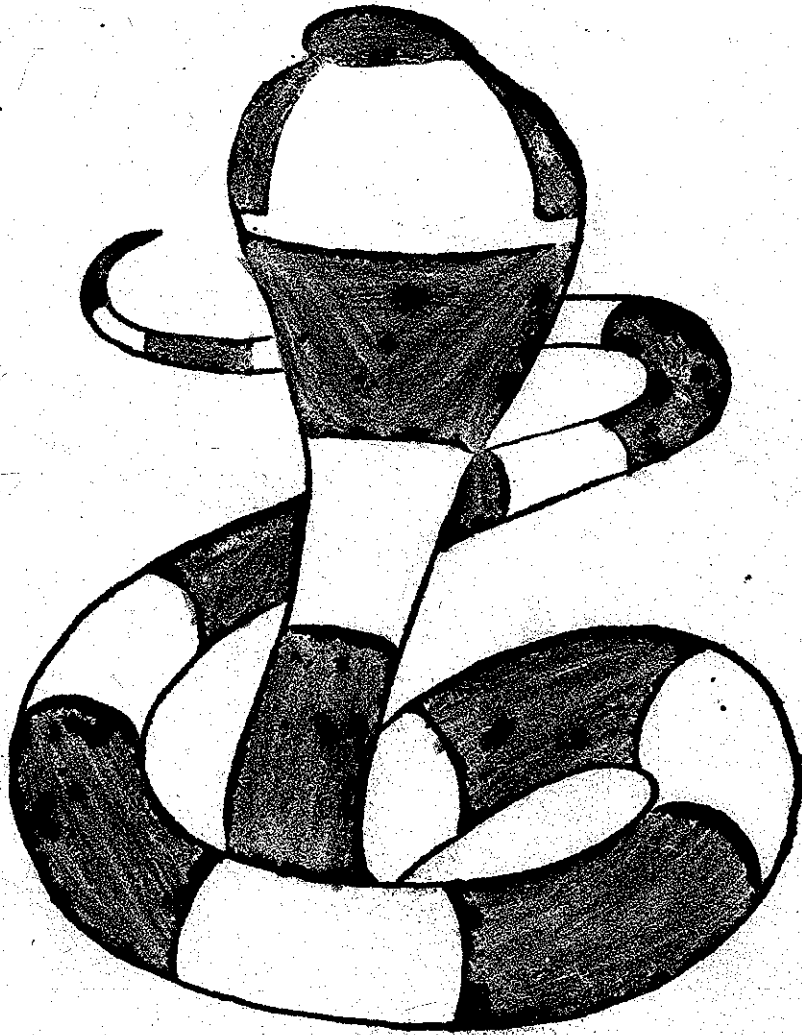


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H.A.R. JOURNAL



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JOTTINGS FROM COBRA CORNER

Dear Member, I must apologise to those members who have been kept in the dark for the past six months and must have been wondering if the H.A.R. had folded up! The story is as follows. At the beginning of September I was offered the post of Director of Salisbury Snake Park and as herpetological activities had already reached the stage where they could occupy me full time, I accepted the position. For the next three months I was busy finishing off various studies at the National Museum and winding up my affairs in Bulawayo. From 1st December until the present time I have been fully occupied with improvements at the Snake Park, as explained below.

To compensate for the missing November Journal, I have made this a double sized issue, but hereafter the Journal will appear quarterly as before. Our first cover from an electronic stencil did not reproduce as well as we would have liked, but we hope to do better next time.

This is the last Journal for the year 1959-60 and subscriptions for 1960-61 are due on the 1st April. Although our membership continues to rise satisfactorily, we have a few members who seem to have become dormant. There are so many problems to be solved in Central African herpetology that there is no excuse for idleness. I should like to see more members taking an interest in lizards, chelonians and amphibians.

Good hunting,

Donald G. Broadley
 Hon. Secretary/Treasurer, H.A.R.
 Director, Salisbury Snake Park.

Hon. Keeper of Herpetology,
 National Museums of Southern Rhodesia.

NEW H.A.R. MEMBERS

- J. Weiman, 36 Carrington Road, Darlington, UMTALI, S. Rhodesia.
- Sgt. P. Taylor, Camp Hospital, Llewellyn Barracks, HEANY, S. Rhodesia.
- O.M.J. Van Vuuren, P.B.162R, BULAWAYO, S. Rhodesia.
- B. Rickson, 6 Bulington House, Fife Avenue, SALISBURY, S. Rhodesia.
- W.J.C. Day, 245 Cranbourne Hostel, SALISBURY, S. Rhodesia.
- F.J.R. Junor, c/o Game Dept., P.O. Box 8054, CAUSEWAY, S. Rhodesia.
- S.H.A. Klasen, c/o Game Dept., KARIBA, S. Rhodesia.
- D. Corton, c/o Salisbury Snake Park, P.O. Box 3489, SALISBURY, S.R.
- R.D. Alves, F.Z.S., c/o Salisbury Snake Park, P.O. Box 3489, SALISBURY, Southern Rhodesia.
- P. Berry, P.O. Box 995, NDOLA, Northern Rhodesia.
- B. Kuipers, P.O. Box 466, BROKEN HILL, Northern Rhodesia.

RESIGNATION

R.M. Isemonger

NEW ASSOCIATE MEMBERS

- Herndon G. Dowling, Curator of Reptiles, New York Zoological Society, 185th Street and Southern Boulevard, NEW YORK 60, N.Y., U.S.A.
- R.F. Raymond, "North Lodge", 17 Victoria Avenue, Parktown, JOHANNESBURG, South Africa.
- Bill Haast, Miami Serpentarium, MIAMI 56, Florida, U.S.A.
- John R. Beale, 4516 Arden Avenue, MINNEAPOLIS 24, Minnesota, U.S.A.

CHANGES OF ADDRESS

- D.G. Broadley, F.Z.S., Hon. Secretary/Treasurer, Salisbury Snake Park, P.O. Box 3489, SALISBURY, S. Rhodesia.
- D.K. Blake, Salisbury Snake Park, P.O. Box 3489, SALISBURY, S. Rhodesia.
- A.H. Siemers, c/o Education Dept., LUSAKA, Northern Rhodesia.
- E.L. McCarthy, F.Z.S., P.O. Box 1338, KITWE, Northern Rhodesia.
- D.S. Rider, Sultana Ranch, P.O. Box 229, QUE QUE, S. Rhodesia.
- L. Balarin, Kumalo School, P.O. Box 1046, BULAWAYO, S. Rhodesia.
- A.G. Shepherd, B.S.A. Police, P.O. Box 188, UMTALI, S. Rhodesia.

WILL MEMBERS PLEASE NOTIFY THE SECRETARY OF ANY CHANGE OF ADDRESS AS SOON AS POSSIBLE.

HON. TREASURER'S REPORT FOR THE YEAR 1958-59.

Balance Sheet for the year ending 31st March 1959.

Balance as at 31st March 1958	£25.. 3.. 9.	Current Account Standard Bank of S.A.	£29..14.. 6
Excess of Revenue over Expenditure for the year	£30.. 2.. 3.	Cash in hand	£25..11.. 6
	£55.. 6.. 0.		£55.. 6.. 0

Revenue and Expenditure Account for the year ending 31st March 1959.

Stationary & Postages	£ 3.. 2.. 6.	Entrance Fees & Subscriptions	£36..15.. 3.
Bank Charges	15.. 0.	Sale of Blazer Badges	£26.. 0.. 0.
Association Journals	£ 5..10.. 0.	Sale of Parasite Oil	15.. 0.
Blazer Badges	£33.. 0.. 6.	Bulawayo Show (10% Net Profits)	£ 9..17.. 0.
Parasite Oil	17.. 0.		
Balance, being excess of Revenue over Expenditure for the year	£30.. 2.. 3.		
	£73.. 7.. 3.		£73.. 7.. 3.

NOTES ON THE AMPHIBIA OF SOUTHERN RHODESIA. PART 4.

By Father K. Tasman, S.J.

PHRYNOBATRACHUS NATALENSIS (A.Smith)

This is one of the smallest of our water frogs, several other species of the genus are smaller still. It is not much in evidence until the rainy season, when it can be heard and often seen just in or near water and around the edges of even temporary pools, in which, like R. delalandii, it has the queer habit of depositing its eggs. These are unusual in floating on the surface. Smith's Frog is widespread and quite common, more so than may be realised. The body is rather plump and there are warts on the back and sides. The toes are half-webbed; snout fairly pointed and again there are slits on each side of the throat in the male. Besides two metatarsal tubercles, there is a characteristic tubercle about half-way along the tarsus. Colour: a shade of brown with darker marks, sometimes a yellow or green vertebral stripe or green spots; a dark pale-edged bar between the eyes. White below with a dark throat and a dark patch over the vent. Length up to 1½ inch or a little more; hind limb about 1½ or nearly 2 inches. Localities: Driefontein; Kutama, Zwimba Reserve; Chishawasha; Monte Cassino, Macheke; Avondale, Salisbury.

CACOSTERNUM BOETTGERI BOETTGERI (Boulenger)

This is a small frog which spends much of its time under cover, except in the breeding season. It is not uncommon in certain districts, although it may escape notice. The body is rather flattened and expanded a little laterally when regarded from above. The snout is fairly well rounded. Both upper and lower surfaces are smooth and there is no webbing on the toes. Though there are no throat slits, there is a small skin-fold between the eye and the front leg. A point of some interest is that when the mating call, a series of clicks, is being made, the vocal sac swells out in front of the throat like a bubble, extraordinarily large in proportion. Colour varies very much. Green dorsally with some darker spots or streaks or brown with small black-bordered green spots. There may be a pale vertebral stripe. Below there are large, dark, irregular spots or blotches on a white ground and this is more constant than any colour pattern above. Length about $\frac{3}{4}$ inch; hind limb a little longer. Localities: Chilimanzi Reserve; Driefontein.

HEMISUS MARMORATUS MARMORATUS (Peters)

This is an odly shaped frog which is distinguished from all the others by the very peculiar shape of the snout, which may aptly be described as pig-like. The head gives the impression that it has been cut sharp from behind the rather prominent eyes; the pointed snout protrudes over the lower lip. Hemisus makes good use of its snout when it burrows, digging itself head first into soft earth. The skin is somewhat warty on the upper surfaces. The legs are short and the toes without webbing. There are no teeth in the upper jaw, but a transverse ridge across the palate and another in front of the oesophagus (Gadow). Though the tadpoles go through most of their development in the normal environment, they are laid and hatched in cavities near water, to which a passage is then made by the female for the tadpoles which emerge. Colour - dorsally a fairly dark olive brown, mottled with a darker shade, flecked with pale yellowish at the sides; a thin yellow vertebral line; a yellowish mark from under the eye obliquely downwards across the sides of the mouth. Whitish below. Length - 1 to $1\frac{1}{2}$ inches, but a Mtoko specimen was 1.9 inches with a breadth of 1.25 inches and a hind leg also about 1.25 inches. Localities: Mtoko; Monte Cassino, Macheke.

PHRYNOMERUS BIFASCIATUS BIFASCIATUS (A.Smith)

This an interesting frog, not often seen, but not really rare, inhabiting a large part of Africa from East Africa to the northern Cape Province. At one time included in the Microhylidae or Brevipectidae it is now placed in a family of its own, the Phrynomeridae. P.bifasciatus is pear-shaped (Rose), the rather stout body ending in a small head with an obtuse snout. There is a definite neck (Rose). The legs are strong and well developed, though the hind pair are short. The toes end in small pads, such as normally indicate an ability to climb. The skin is smooth and slimy and excretes a poison fatal to other frogs. Ordinarily

Phrynomerus walks and does not hop. It burrows and can be found in holes in the ground and old tree stumps, it has been reported by Mitchell to frequent termitaria. There is nothing abnormal about the deposition and development of the eggs. Colour - black above with a red streak on each side from above the eye to near the groin; a red mark posteriorly, in the form of a nearly filled in U; large red spots on the legs; dark brownish or bluish grey below with white spots and blotches anteriorly. Length - body $1\frac{1}{2}$ to 2 inches, hind legs about the same or a little less. Localities: Chilimanzi Reserve; Driefontein; Musami, Mrewa Reserve.

BREVICEPS MOSSAMBICUS Peters

This is the only representative of the Microhylidae found in Southern Rhodesia. Like others of the genus, it is of special interest owing to its habits and its shape. It is a burrower; its eggs are laid in a hole underground or under cover and the development takes place entirely in the egg capsule from which the young emerge as fully formed frogs. If by accident a Breviceps falls into water, it is helpless and unable to swim. On land it moves not by jumps, but with a scrambling walk. The body is in appearance much inflated; the head is very short, eyes prominent, snout blunt and short, mouth turned down at the corners. The limbs are not fully visible, but are not long, the hind legs are strong and muscular. Hind feet of good size, with outer and inner toes much reduced but with a large shovel-process. No teeth in the upper jaw, but a serrated skin-fold at the back of the palate. The skin on the back may be a little rough and warty. Colour - dorsally pale or reddish brown with dark blotches or spots: or dark with pale blotches, sometimes a little reticulation. Often the darker parts have a mauve or purplish tint. One or two dark, pale-edged streaks run obliquely downward from the corner of the eye. Below it is more or less uniformly white. Length may be nearly 2 inches; breadth $1\frac{1}{2}$ to just over 2 inches. Localities: Mtoko; Monte Cassino, Macheke; Emerald Hill, Salisbury; Norselands, Vumba; Chilimanzi Reserve; Driefontein; St Barbara's and Triashill Missions, Makoni District.

VERNACULAR NAMES.

By

Desmond Vesey-FitzGerald

It seems that a useful service that members of the H.A.R. who live in the Federation might perform is to record the vernacular names of snakes and other reptiles. The first attempt at this may be rather unrewarding. While still using one's own language, if this happens to be English, one is almost certain to be told that the name of any snake seen in Africa is "Mamba", and that it was not only the most deadly, but also the longest specimen on record. If you, as a herpetologist, have the opportunity of identifying the specimen and pronounce that it is a perfectly harmless, very common, and not particularly large specimen of a House-Snake, you will have only lost the co-operation of yet one more informant.

Collecting vernacular names is a subtle art. In the first place you need yourself to be fairly well informed about snakes, at least you must be able to identify, or know how to get the specimen under discussion identified. Also you must have some knowledge of the vernacular in question. But at the same time to draw out information you must not appear to know all the answers beforehand. Only by listening to what the other fellow says can you form an opinion as to whether he knows what he is talking about or not.

There are certain rules to keep in mind while collecting vernacular names. First of all don't forget to record what language you are talking, and to allow for dialects, note the place where the information was obtained. Find out what tribe your informant belongs to and if he is using his mother tongue, or is a stranger from elsewhere remembering something he heard about in his homeland. A good test of validity while recording names of plants is to ask if the herb is used for any purpose. In the case of snakes usefulness is not likely to apply, but one can always ask if the reptile is dangerous or not. If you are told it is deadly it may or may not mean something, but if your informant says it is harmless (and you are able to confirm this) he is probably a pretty reliable naturalist and what he tells you should be noted down.

Having obtained your initial information you must go on asking and testing the reliability of each name. In this way a large number of names may prove to be meaningless, but in other cases a meaning may emerge that was not apparent at first. You as a herpetologist will probably be thinking in terms of species, while your informer, especially if he is a "bush-type", may be thinking in terms of ecology. For instance he may group under one name all burrowing snakes, under another all tree-snakes and so on. You should even be tolerant if you find him grouping all green snakes and all black snakes together. You are learning all the time and your list is gaining all the time in interest.

Throughout your researches you must always bear in mind that whereas scientific names are bound by the International Rules of Nomenclature, vernacular names depend only on common usage. Different people may use different names for the same creature, or the same name for different creatures and they will be quite correct if it is the custom of their country. My own compatriots like to call the "stoat" a "weasel", which of course confounds the English. But we are not confused, or incorrect either, because there are no weasels in Ireland. Another fruitful cause of argument is the difference between a "crocodile" and an "alligator", but I never take part in the discussion, I just listen and find out which name the particular people who are talking give to the particular reptile they know. If you want to know the difference between species in the genera Crocodylus and Alligator this can be found precisely defined in the literature.

I hope that this article has suggested a few ways in which vernacular names may be obtained and verified. I hope it may stimulate interest in this line of research, because in Africa the true naturalist who knew the creatures of the bush is rapidly becoming too educated to know anything at all about them.

THREE FIELD TRIPS IN MATABELELAND. By Donald G. Broadley.

During the last Rhodes & Founders holiday weekend Luchi Balarin and I made a short trip to the Beitbridge area. We left Bulawayo during the afternoon of Friday, 10th July and camped for the night 25 miles south of West Nicholson. The next morning we pushed on to Jopempi, a hill 50 miles north of Beitbridge. On the lower slopes we saw only the common skink Mabuya v. varia until Luchi disturbed a Psammophis s. subtaeniatus concealed in a rotten log. The snake shot down the hillside and vanished. A promising rock outcrop yielded only Mabuya varia to begin with, then I found and noosed a large gecko (Pachydactylus bibronii) in a crevice. Further inspection eventually revealed two fine Gerrhosaurus major grandis in a deep crevice. They were out of noosing range, so I shot one with .22 dust shot, but it wriggled further into the crack. We then began to demolish the whole outcrop with the aid of a crowbar. There was about 5 feet of rock in several layers and in the crevices we collected a number of geckos - Hemidactylus mabouia and Pachydactylus bibronii. After throwing about two tons of rock down the hillside we finally caught the two Gerrhosaurus. A lot of hard work for two lizards!

We continued our journey and made a short stop at a sandstone outcrop 18 miles north of Beitbridge. I missed a Psammophis s. subtaeniatus among the rocks and we collected a few rupicolour lizards. We carried on to Beitbridge and camped at the Limpopo-Umzingwane Junction.

One of our main objectives at Beitbridge was a fossorial skink with degenerate limbs - Scelotes limpopoensis, only known from this area and at this time unrepresented in the National Museum collection. However, the afternoon we left Bulawayo for Beitbridge I checked my "In" tray at the Museum and found a bottle containing 3 live Scelotes collected by Gene Engelbrecht at Beitbridge. We called on Gene, who is with the Irrigation Department, and he told us that he had found them in post holes in sandy soil.

On the Sunday morning we worked around the Limpopo-Umzingwane confluence and tried burning some big piles of riverine debris without much success. Working up the Umzingwane I eventually caught a Scelotes under a stone in leaf mould on a granite outcrop. We then started collecting the inevitable rupicolous lizards - Hemidactylus mabouia; Pachydactylus bibronii; Mabuya g. margaritifera; Platysaurus g. rhodesianus and Gerrhosaurus v. validus. Then I spotted a flattened gecko in a crevice which was much more exciting. This was Afroedura transvaalica, a much depressed form which lives in very narrow rock fissures. There were only half a dozen specimens in the National Museum, so we concentrated on Afroedura and using our trusty crowbar we opened up every promising crevice. We soon found that the very narrow fissures which did not look capable of harbouring a cockroach were in fact full of Afroedura, packed like sardines. Many were females with eggs. By the time we had collected 28 specimens Luchi was sick of the sight of them! The only other reptile taken in the two days spent in the area was a Varanus niloticus which Luchi shot on the Umzingwane.

On the Monday evening we went out on the Limpopo after small crocodiles with Gene Engelbrecht. Although we worked over the whole stretch of the river between the Beit Bridge and the gorge just below the Umzingwane confluence, we only saw five crocodiles. We got close to several of them, but each time the boat hit the rock on which the reptile was resting and disturbed it. We had numerous "false alarms", for the nightjars sitting on the river bank had eyes which glowed red in a torch beam exactly like those of a small crocodile. On the Limpopo the very small crocodiles apparently live in the thick reedbeds, for those we saw were 4 or 5 feet in length.

On the Tuesday morning we set off for home and made our first stop at the sandstone outcrop after 18 miles. The first crevice examined contained a 2 foot Varanus e. albigularis, which was soon chivvied out and captured. On top of the same outcrop I found a fine 4 foot albigularis under a flake of rock and he also came quietly! Then we ran into Afroedura again and collected another 15 specimens.

On the return journey I stopped at several likely looking outcrops but found no more Afroedura. The only find of interest was a Pond Terrapin (Pelomedusa s. subrufa) taken in a dry reservoir on the derelict Eagle Vulture Mine.

On 13th November Roger Blaylock and I left Bulawayo at 5 p.m. for the Victoria Falls. We picked up a few Bufo regularis near Lupane and soon afterwards found the road littered with the smashed bodies of Rana d. delalandii. We found no live specimens and it would appear that there had been a mass migration of this species. We stopped for the night near Fatima Mission.

In the morning we pressed on, stopping to collect a nice Gerrhosaurus nigrolineatus at the Ilamba River. We stopped for lunch at the Lukosi River and worked over a large granite kopje. I was surprised to find Mabuya damarana here, for it had only previously been taken in Rhodesia much further east at Kariba and in the Birch-enough Bridge area. We also got Gerrhosaurus v. validus and Mabuya q. margaritifera. We finally picked up our first snake 10 miles short of Victoria Falls - a 2 foot Boaedon f. fuliginosus D.O.R.

On arrival at the Falls we worked over the rain forest on the Southern Rhodesian side and Roger caught a nice Natriciteres o. olivacea which I flushed, shortly afterwards I flushed and caught a Philothamnus hoplogaster. These frog-eating snakes were obviously hunting the tiny Phrynobatrachus u. mababiensis which abounded in the wet grass. That night we again worked through the rain forest and also the bottom of the Falls on the north bank, but all we found were a few Bufo regularis.

In the morning we took some photographs and Roger caught a Crotaphopeltis h. hotamboeia in the rain forest, another frog-eating snake! We then set off on the return journey. We stopped for lunch 30 miles from the Falls near the Matetsi River and I found a young Pachydactylus c. oshaughnessyi under a stone. We collected a few more specimens at the Lukosi River, including a couple of Agama kirkii. The return journey was uneventful until a few miles before the Gwaai River Bridge, the log book then records:

- Speedo 7233 Dispholidus typus crossed road, escaped.
 7235 Naja nigricollis mossambica DOR - stomach contents
 a well digested snake, ? Aparallactus l. lunulatus.
 7238 Stopped for a Gerrhosaurus and picked up a Lepto-
typhlops scutifrons on the road.
 7239 Gerrhosaurus nigrolineatus DOR
 7242 Gwaai River Bridge
 7252 Gerrhosaurus v. validus DOR
 7253 Gerrhosaurus nigrolineatus DOR Stopped for dinner.
 7268 Naja haje ? anchietae This cobra was lying on a strip
 after dark and I swerved round it and stopped. It had
 not moved when Roger reached it and was easily cap-
 tured. The snake was about 3 feet long and had 17
 midbody scale rows, more specimens from this area
 will show whether the local cobras are pure anchietae
 or merely intergrades.

We missed one snake on the road near Lupane, but saw nothing more
 on the way back to Bulawayo.

 A week later (20th November) Luchi Balarin, Roger Blaylock and
 myself set out for Lupane. There had been some rain in that area
 during the previous 24 hours and this probably accounted for the
 best spell of snake collecting any of us had experienced in Rhodesia.
 We missed one snake just after Lupane, but nothing escaped us there-
 after. The log book tells the story, the first entry being 99 miles
 from Bulawayo at about 7.30 p.m.

- Speedo 7563 Bitis a. arietans DOR
 7566 Telescopus s. semiannulatus captured
 7566 Causus defilippii captured
 7569 Naja n. mossambica captured
 7570 Boaedon f. fuliginosus DOR; Elapsoidea s. decosteri
 captured in drain.
 7571 Naja n. mossambica captured
 7573 Lupane
 7577 Lycophidion c. capense captured
 7577 Homopholis wahlbergii (wahlberg's Gecko) captured
 7578 Aspidelaps s. scutatus captured
 7590 Stopped for the night.

Our technique was as follows. The Van cruised at 20 m.p.h., with
 both windscreens open for clearer vision. One passenger carried a
 small flour bag full of sand, which he dropped out of the open
 windscreen as we passed a snake. The driver then pulled over to the
 side of the road and stopped; the passengers immediately jumped out
 and dashed back to the white bag which indicated the approximate
 position of the snake. The Volkswagen Van proved perfect for night
 collecting on the road, the excellent forward vision enabled us
 to spot the snakes in good time so that we could pull up close to
 them.

- In the morning our good run continued:
 Speedo 7591 Aparallactus l. lunulatus DOR
 7591 Psemmochis s. sibilans (juv.) captured

Near Fatima Mission we collected a number of lizards - Ichnotrophis squamulosa; Mabuva striata and Gerrhosaurus nigrolineatus. We stopped a little further on at Chimwara Ranch and collected some more lizards - Agama h. armata; Ichnotrophis capensis and Riopa sundevallii. We also found two Hinged Tortoises (Kinyxs b. belliana) hiding in hollow logs. Shortly after this I stopped for an Agama basking on the road and found a Typhlacontias ngamiensis DOR. This tiny limbless skink had not previously been found in Southern Rhodesia, although recorded from the Kalahari and also from Kabompo in Northern Rhodesia. Just after this we found a Crotaphopeltis h. hotamboeia DOR.

We called in at Chimwara Ranch and Commander Coombe detailed one of his boys to show us a rocky ridge inhabited by mambas. We saw no mambas, but beside the path was a rubbish heap, and on it were two enormous terrapin carapaces, which I picked up. They appear to be very old Pelusios sinuatus with only very feeble serrations, the larger carapace measures 360 mm in a straight line. We found some Chiromantis nests on the ranch, but could not locate the frogs. We crossed the Gwaai and found two snakes DOR 4 miles on, a Typhlops s. mucruso and a Naja n. mossambica. We turned round and had lunch, then worked along the Gwaai until dinner time. As soon as it was dark we set out again with hopes of another good haul.

Our first stop was at a small stream near Fatima where the local frogs were very vocal. We collected the following species: Rana o. oxyrhynchus; Rana d. delalandii; Hemisus m. marmoratus; Chiromantis x. xerampelina and Phrynobatrachus natalensis. Then we pushed on and the log book records:

- Speedo 7693 Telescopus s. semiannulatus captured
 7697 Prosymna lineata and Aspidelaps s. scutatus - We passed the Prosymna and as I pulled up the van's headlights picked up the Shield Snake on the road ahead. Both snakes were captured.
- 7708 Lupane
 7708 Naja n. mossambica captured
 7708 Aparallactus c. capensis DOR
 7709 Psammophis s. sibilans DOR
 7711 Boaedon f. fuliginosus DOR
 7722 Boaedon f. fuliginosus (juv.) captured
 7726 Naja n. mossambica DOR
 7733 Pulled in for the night near Kenmuir.

Next morning we found another Spitting Cobra DOR before we tackled a well wooded hillside on Kalahari sand near Kenmuir. I finally collected my first amphisbaenid - an Amphisbaena q. capensis under a log, other lizards collected were Riopa sundevallii; Ichnotrophis capensis and Agama h. armata. We then returned to Lupane and turned east towards St. Pauls Hospital along a road running through beautiful well-wooded country on Kalahari sand. We worked over this area thoroughly, turning over numerous rotten logs and digging beneath them. Luchi flushed the only snake encountered, a Psammophis jallae which was dug out of the hole into which it vanished. Roger dug up two more Typhlacontias ngamiensis under a log, other lizards taken were Pachydactylus p. punctatus; Agama cyanogaster; Riopa

sundevallii; Ablepharus wahlbergii and Ichnotrophis capensis.

That night we patrolled the road again, but the only snake taken was a young Naja n. mossambica, so we turned for home. In the three nights we captured 14 out of 15 live snakes seen. This 40 miles stretch of road is a black-topped 9 foot tarmat and the snakes stand out beautifully against it. Collecting here in the Kalahari sandveld after rain should always prove profitable, but our poor third night showed that dry conditions quickly reduce the haul.

SOME NOTES ON THE FEEDING HABITS OF THE SERRATED TERRAPIN.

By David K. Blake

In January 1959 I obtained a large specimen of the Serrated Terrapin (Pelusios sinuatus) from the Nyamashatu River near Umtali. Although I have had this specimen in captivity for over a year, it was not until I constructed a pond in my Tortoise Pen in October 1959 that I was able to make any observations on the feeding habits.

Prior to the construction of the pond, evidence showed that old dog's bones had been gnawed and any gristle or meat remaining on them had been eaten. This was taken at night which ruled out the tortoises, who also chewed at the bones during the day.

After the pond was built the following food was taken while under observation:- live and dead frogs (Rana angolensis), toads (Bufo regularis) and platannas (Xenopus laevis); dead snakes of various species; rotten plums and peaches.

The terrapin was first observed eating when balls of raw mince-meat were placed in the water at night; the technique adopted was similar to that used for devouring frogs and snakes as described below. Eating continued despite the use of a torch, in fact at a later stage if the meat was placed on the bank and the torch shone on it the terrapin would leave the water, take the meat and return to the water to devour it. Chunks of meat could not be coped with as the texture was too firm to tear.

In the case of amphibians, whether dead or alive, the procedure was similar. The terrapin cozes up behind the frog in the water, seizes it by the hind leg and pulls it struggling to the bottom, where with several sweeps of the fore legs the claws tear the limb from the hapless amphibian. Still using the claws, any excess flesh outside the mouth is torn away, allowing the portion in the mouth to be swallowed. The torn flesh, if big enough, is usually retrieved and swallowed. If there is only one amphibian in the pond it will be followed up and have another limb removed, usually after this the amphibian is dead, whereon it sinks to the bottom and is devoured in the same manner as the limbs are removed. Should there be more than one amphibian in the water it is not unusual to find several dead with hind limbs missing.

Dead snakes are simply torn and devoured. Fruit was taken when floating on the surface, pulled to the bottom where a piece was removed, the terrapin repeatedly returning to the surface to retrieve the fruit. If the fruit did not float it was eaten on the bottom.

The tearing of the prey and the tearing of all food in the mouth is, as said before, by the use of the forelegs. The foreleg is placed at the back of the mouth with the palm outwards; the claws are then pushed forwards and outwards, at the same time the head is forced sideways against the claws. This may be carried out on one side only or alternately, but is never done on both sides together. The terrapin was never observed eating on the surface and long periods were spent eating on the bottom without returning to the surface for air.

PROBLEMS AT SALISBURY SNAKE PARK. By Donald G. Broadley, Director.

I took over as Director of Salisbury Snake Park on 1st December last and Dave Blake joined me as Deputy Director on 1st February. During the first twelve months of its existence the Park had been run purely as an exhibition. The mortality among the snakes was terrific and none of these snakes had been preserved for science, although some rare specimens had come to the Park, particularly from Kariba. Snakes put in the big centre pit died within a few weeks from the heat. In the large cages the position was little better, for the pythons, boomslangs, vine snakes and mambas invariably coiled up on the roof beams directly under the asbestos roof and again got too hot. The large cages had their floors covered with river sand over a thick layer of broken brick. Any snake with an inclination to burrow through the sand could find a refuge in the broken brick; also the sharp-edged grains of river sand got into the snakes' mouths and caused minute abrasions which soon picked up bacterial infections, resulting in a high incidence of mouth canker in the collection - particularly among pythons, cobras and mole snakes. The former Director had not attempted to quarantine new consignments of snakes or control parasites, consequently the collection was infested with ticks and mites. There was also a high mortality among those snakes which do not feed well in captivity due to heavy infestations of nematode and trematode worms. The feeding problem was a serious one, for the former Director had released the Park's stock of white mice into a nearby vlei before he left.

When Lawrence A. Hautz, the owner of the Salisbury Motel and the Snake Park, engaged me as Director he agreed to spend another £2,000 (\$5,600) on improvements at the Snake Park, in order to establish a first class collection in healthy conditions and put the place on a scientific footing.

The immediate problem was to cut the mortality rate and at the same time to increase gate receipts. Before the former Director left the Park was open only at weekends, thus missing most of the tourist traffic. We immediately changed this and are now open every day, so that we catch a lot of road traffic from Bulawayo to Salisbury and the Tourist Agencies can send people out at any time.

As I write, the aluminium sheeting is being fitted on the new £1,400 roof over the main pit, so we shall shortly be able to fill the pit with snakes again. The arena will be well lit, so that we can put on evening shows. The roof will also cut down the growth of algae in the moat, so that we can stabilise conditions instead of

having to drain off the water every week. The predators in the moat are 3 foot crocodiles, small Varanus niloticus (big ones devour too many snakes!) and terrapins of three different species. We aim to build up the best collection of terrapins in Africa. Food supplies consist of small barbel, platannas and other amphibians and a few insects to provide variety. We are hoping that Boulengerina will settle down in the moat.

The large cages have all been fitted with ceilings and the floors raised, concreted and covered with pine bark. At first I tried pit sand, but although this was too fine to cause mouth canker, it was also fine enough to be inhaled and this caused a nasal infection which caused a high mortality among the cobras. The pine bark is good because it holds moisture and hence keeps the humidity higher, it cannot be inhaled or get into the mouth and it helps the snakes to slough easily. Incidentally it also makes it very difficult to spot the Gaboon Vipers! The danger with pine bark is that it affords excellent cover for mites, but we overcame this by soaking the bags of bark in a cattle dip and impregnating the flakes of bark so that there was a residual effect. So far this seems to be the answer, and the cobras are looking much better.

Stamping out parasites is a difficult undertaking when they are well established. We eliminated the ticks by checking each snake, dabbing the ticks with alcohol and then removing them with tweezers. Mites are the biggest headache, for nobody has yet discovered an insecticide which kills all the mites without killing the reptilian host. We remove infested snakes and place them in a bag with pyrethrum powder for 24 hours. This kills the adult mites, but not the eggs, and there is no residual effect, so the snakes must be powdered at frequent intervals in order to kill the newly hatched mites. The cages are washed out with an insecticide. Intestinal parasites are controlled by using "Pipricide", a worm powder containing Pi erazine which is placed in the drinking water.

The snakes that do not feed voluntarily are force fed with a catheter tube and rubber bulb. The mixture given contains egg yolks, powdered milk, meat extract and vitamins.

The cages will shortly be wired for heating during the winter months. The existing small cages will be replaced by a better design.

It is our aim to build up a first class collection of African reptiles, with a selection of the more spectacular species from other parts of the world. A consignment from Australia are on order and soon afterwards we shall be getting consignments of American reptiles.

The National Museum herpetological study collections will shortly be moved to the Snake Park, so that I can continue my taxonomic studies, etc. All worthwhile specimens that die in the Park will be preserved in the National Museum study collection.

With the headquarters of the H.A.R. lodged at the Park it will be much easier to organise expeditions, etc. H.A.R. members are admitted free at all times on production of their membership card. Facilities for research and study will be granted wherever possible.

As soon as time and finances permit we shall install a recording system, so that we can keep growth, feeding and breeding records for specimens in the permanent collection.

THE BOOMSLANG (DISPHOLIDUS TYPUS) IN CENTRAL AFRICA.

By Donald G. Broadley.

Dispholidus typus had for many years been regarded as a monotypic genus, when in 1955 Dr. R.F. Laurent revived the name viridis A. Smith and described two new forms - kivuensis and punctatus. In 1956 he published a useful summary of the variation in the three races found in Angola, the Congo Belge and the Mporokoso - Abercorn region of Northern Rhodesia. I have checked the data for a long series of Dispholidus from the Rhodesias and my intention here is to try and indicate the range of the different races. I hope that Northern Rhodesian members will check any boomslangs that they collect and help to clarify the distribution of punctatus and kivuensis.

It seems probable that viridis A. Smith is merely a synonym of typus A. Smith, both forms being described from the same type locality - "Old Latakoo".

The races may be separated as follows:

1. Subcaudals in males 112-130, females 104-127.....typus
Subcaudals in males 97-117, females 90-109.....2
2. Males green, with or without black scale edgings.....kivuensis
Males black, with a yellow spot on each scale.....punctatus

Dispholidus typus typus (A. Smith) Common Boomslang

Males usually green with black scale-edgings, sometimes uniform green or olive-green with a pale blue ventrum, rarely olive brown. Females brown to blackish, olive or grey.

	Subcaudals males	females
95 from Southern Rhodesia (Broadley)	112-130	104-127
26 from Northern Rhodesia (Broadley)	115-130	110-120
8 from Congo Belge, Ituri (Laurent)	113-121	107-112

Range: All Southern Rhodesia and Nyasaland. Northern Rhodesia - Mumbwa; Lukonkola; Mazabuka; Fort Jameson; Lusaka; Sinayongwe; Livingstone; Kalomo; Kasusu; Mulanga; Lundazi; Kacholola.

Dispholidus typus kivuensis Laurent Kivu Boomslang

Males green, often with scales heavily edged with black. Females brown.

	Subcaudals males	females
13 from Congo Belge, Kivu (Laurent)	99-110	102
10 from Northern Rhodesia (Broadley)	100-110	90-104

Range: Congo Belge - Kivu. Northern Rhodesia - Abercorn; Chilongowelo.

Dispholidus typus punctatus Laurent Spotted Boomslang

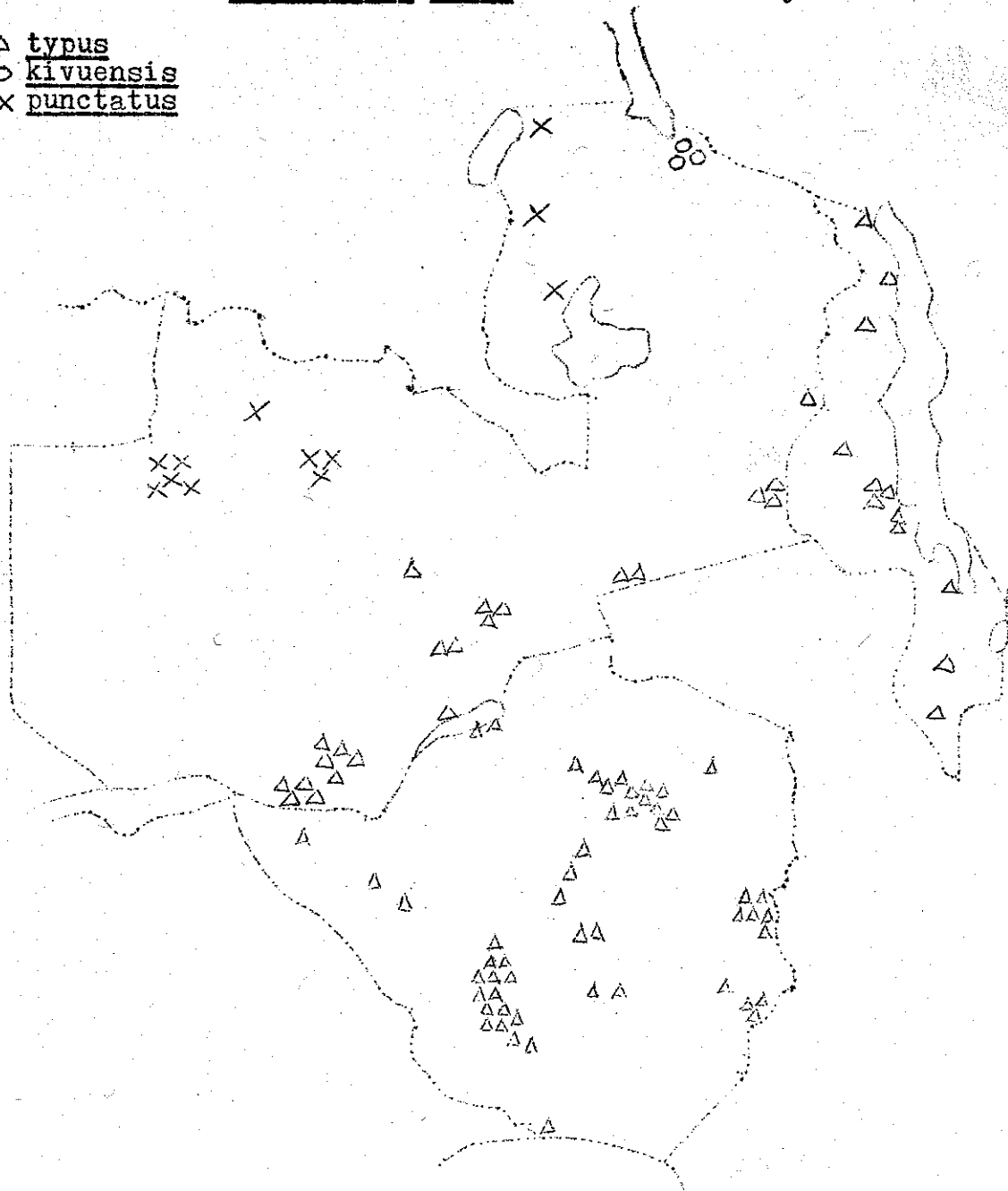
Males black with a yellow or orange spot on each scale, head spotted. Females brown.

	Subcaudals males	females
34 from Angola & Congo Belge (Laurent)	97-114	97-108
13 from Northern Rhodesia (Broadley)	111-117	100-109

Range: Angola, Congo Belge. Northern Rhodesia -- Kasempa; 40 miles NW of Kasempa; Kabompo; Kawambwa.

Distribution of Dispholidus typus in Rhodesia & Nyasaland.

- △ typus
 ○ kivuensis
 × punctatus



SOME CASE HISTORIES OF SNAKE BITES IN SOUTHERN RHODESIA

By Richard Alves.

(Extracted from "The Treatment of Snakebites in Southern Rhodesia with special reference to three species of snake." published in the Central African Journal of Medicine.).

Case 1. Egyptian Cobra bite (Naja haje).

Mr. Donald Gray bitten in left shin by a large cobra at 9.45 a.m. Panicked and ran some 20 yds. to his truck, where his African driver applied a ligature above and below the knee. Then driven to his home, where he was given ten cc. antivenene split three ways, round the bite, in the "groin" and subcutaneously in the umbilical region (time delay, bite to serum 65 minutes), sal volatile given for shock. Despatched to hospital where now some two and a quarter hours had elapsed from the time of the bite, given a further ten cc. of antivenene. Signs of weakness in respiration soon after admission. By 4.30 p.m. almost completely paralysed, respirator applied by 7 p.m. Expired 1 a.m. next morning, some seventeen hours after the bite. Total serum administered up to time of death 50 cc. Inquest, verdict of death due to asphyxia due to respiratory paralysis, resulting from a snake bite.

Case 2. Puffadder bite (Bitis arietans).

Mr. Roger Blaylock, herpetologist, bitten while handling snake, which was 12 inches in length. Both fangs punctured a finger. No ligature applied. Time delay, bite to serum: 3 minutes, 20 cc. antivenene administered, 10 cc. in and around bite, 10 cc. intramuscularly. Twentyfive minutes later, in hospital, he received a further 8 cc. intravenously. Only a slight amount of oedematus around the afflicted hand. No local destruction of tissue. Discharged from Hospital four days after bite.

Case 3. Puffadder bite (Bitis arietans).

Mr. D.G. Broadley, Director, Salisbury Snake Park. 7.40 a.m. bitten by a two foot puffadder while checking a consignment. Both fangs punctured a finger. Ligature applied immediately to base of finger, intense pain at site of bite, finger swelled immediately. Injected 7 cc. antivenene into back of hand, then removed ligature after five minutes, thus releasing the circulation after the venom had been contained and allowed to work on the blood and its vessels. Arrived at hospital twenty minutes after bite, pain now a heavy throbbing in finger, swelling travelled to hand, 10 cc. antivenene injected intramuscularly, fifteen minutes later a further 10 cc. given intravenously. 10 a.m. oedematus reached elbow, hand painful and throbbing. 7 p.m. oedematus reached shoulder. Haemorrhage discolouration from elbow to armpit. Saline and two pints of blood given. Extensive blood blisters on bitten finger opened and allowed to drain. Second and third day under observation, 1 a.m. fourth day bleeding from finger stopped, oedema pressure increased, causing intense pain. 4 a.m. oedema burst at fang punctures, haemorrhaging arterial blood. 9 a.m. first appearance of gangrenous condition. 7.30 p.m. finger amputated at base and incisions made in wrist, palm and back of hand to relieve oedema. A slight serum rash was noticed the next morning, this soon passed off. Discharged from hospital ten days after bite. On 27th day after bite the bitten hand became swollen, but cleared up after treatment with antibiotics.

Case 4. Western Diamondback Rattlesnake bite (Crotalus atrox).

The author, bitten while bathing snake. One fang entered ball of index finger. Rubber ligature applied immediately above the first joint of the finger. Arrived at hospital ten minutes later. As no specific serum was available, three incisions were made to the site of the bite and a small rubber drain passed through. The ligature was removed and the incisions allowed to bleed. When the patient attempted to stand up, he suffered an attack of nausea and giddiness, on lying down this immediately passed off. By that evening, oedema had stretched from fingers to armpit. By noon the next day the incised finger had stopped draining. Patient discharged on 4th day, after oedema had disappeared but still with haemorrhagic discolouration from elbow to armpit. The incisions took three months to heal, leaving patient with withered and stiff finger, despite Physiotherapy and Radiological treatment.

BITE FROM AN AMPLORHINUS MULTIMACULATUS AT UMTALI

By David K. Blake

While collecting specimens on the Tsetsera range I captured what at first glance appeared to be a specimen of Duberria l. rhodesiana and without further scrutiny I placed it in a collecting bag. Shortly after this a Bitis atropos was taken and placed in the same bag; being leath to disturb the bag it was not reopened until my return to Umtali, when I removed the B. atropos and proceeded to feel for the other snake with my left hand.

On withdrawing my hand I was amazed to observe my "slug-eater" fastened firmly to the second finger of my left hand and chewing vigorously. This I allowed him to do and shortly felt a burning sensation at the site of the bite, so I gently removed him and a close scrutiny revealed that it was a specimen of Amplorhinus multi-maculatus (the third specimen taken in S. Rhodesia and the first from this area).

The bite bled freely at first and there was a sharp burning at the site of the bite, which now became inflamed for an area about 15 mm. in diameter. This inflammation lasted for about 24 hours, with a definite, though slight, swelling. The symptoms were purely local and no further effects were felt.

I have received several minor bites from Thelotornis and would add that I did not experience the burning sensation experienced in this case, which was nearer to a mild bite from Causus defilippii.

CASE HISTORY OF A BROWN MAMBA BITE. By David K. Blake.

On Friday 13th November 1959 at 11.30 a.m. I was bitten on the inside of the first joint of my left thumb by a Southern Brown Mamba (Dendroaspis p. polylepis). While putting a freshly caught mamba into a sack held by an African I was bitten through the bag. As I released the mamba's head the African dropped the bag, forcing me to grab the bag with my right hand and close it with my left. The snake's head was in the neck of the bag and it promptly sank one fang into my thumb. I immediately sucked the bite, which did not bleed at all, and made for the nearest house about one hundred yards away.

As there was only a slight smarting at the site of the bite, I decided to forgo any treatment and returned to work.

The thumb continued to smart a little and became slightly inflamed and swollen around the actual bite, but no other reaction was felt for some time. At 12.10 p.m. while bending over I felt a tightness in the chest and found difficulty in taking a deep breath; this condition slowly got worse and my throat became sore, making it difficult to swallow. Still being reluctant to have treatment, I took three asparins at 12.15. By now all the muscles of my upper body ached if I moved and my whole body was tender if touched, including the scalp. At 12.30 my pulse was taken and stood at 80, this being about 12 beats above normal. There was no effect whatsoever to my sense of taste, sight, smell, hearing or balance and I remained at work. At lunch I had difficulty in chewing and swallowing my food. At 1.30 I took a further two asparins and returned to work. My condition slowly improved throughout the afternoon and by 6 p.m. was back to normal.

The following day the thumb was still slightly swollen, but there were no other effects. The swelling slowly subsided until there was only a hard lump left at the site of the bite, which was sore to the touch.

The most interesting point in this case was that there was very little indication that any venom had been deposited for the first 45 minutes and as a result no first aid treatment was given. The mamba was about 6½ feet in length.

HERE AND THERE

Sabi Experimental Station - A fine specimen of Xenocalamus b. bicolor obtained by W.W.Armitage. This is the first definite record of this genus from Southern Rhodesia, for the type locality of bicolor is "Zambezi".

Inyanga Tea Estates - The first specimen of Dasypeltis m. medici to be recorded south of the Zambezi was collected by A.G.Shepherd.

Northern Province, Nyasaland - We trust that there is no truth in the rumour that Bill Mitchell disdainfully brushed numerous songos¹ aside while searching for Ufiti²!

¹Songo - a legendary crowned crowing crested serpent of great size and extreme aggressiveness. Known by all African tribes from Nyasaland to Zululand but unknown to science!

²Ufiti - literally "ghost", another legendary creature of the rain forests in northern Nyasaland. Recently identified by Bill Mitchell as an undescribed race of chimpanzee.

X. sabiensis

ADVERTISEMENTS.

Space available to Members and Associate Members at 3/6 (50 cents) per inch, per insertion.

The original stock of H.A.R. Blazer Badges is now sold out and there have been a number of requests for the . I am prepared to order another dozen from London, but must have definite orders for them first. If you want one of these blazer badges - H.A.R. badge in gold wire and full colour, send 57/6 with your order.

Hon. Secretary, H.A.R.

The Salisbury Snake Park is now supplying venom to the South African Institute for Medical Research and also acting as agents for the sale of S.A.I.M.R. Snake Bite Outfits and Serum, which are available to H.A.R. Members at special prices as follows:

	Retail Price	H.A.R. Members only
Complete Snake Bite Outfit.....	75/-	60/-
10 mls. Polyvalent Serum.....	20/-	17/6
10 mls. Tropical Polyvalent Serum.....	25/-	22/6

This offer is limited to FULL Members only. It is also emphasised that the concession is for H.A.R. Members only and orders for large and unreasonable quantities will not be met. Send orders to the Hon. Secretary, H.A.R., P.O.Box 3489, Salisbury - cheques to be made out to Salisbury Snake Park. Postage - 1/6 on a complete outfit; 6d for each 10 mls. of serum.

SALISBURY SNAKE PARK - Wanted Reptiles of all kinds, but particularly the following:

Prices paid per foot, delivered at Snake Park.

Egyptian Cobras (<u>Naja haje</u>)	Up to 6 feet	4/-	Above 6 feet	5/-
Spitting Cobras (<u>N.nigricollis</u>)	Up to 4 feet	2/-	Above 4 feet	2/6
Forest Cobras (<u>N.melanoleuca</u>)	Up to 6 feet	7/6	Above 6 feet	10/-
Mambas (<u>Dendroaspis</u>)	Up to 6 feet	7/6	Above 6 feet	10/-
Rinkals (<u>Hemachatus</u>)	Up to 2 feet	4/-	Above 2 feet	5/-
Puffadders (<u>Bitis arietans</u>)	Up to 3 feet	2/6	Above 3 feet	3/-
Gaboon Vipers (<u>B.abonica</u>)	Up to 3 feet	15/-	Above 3 feet	20/-

YOU COULD USE THIS SPACE !!!