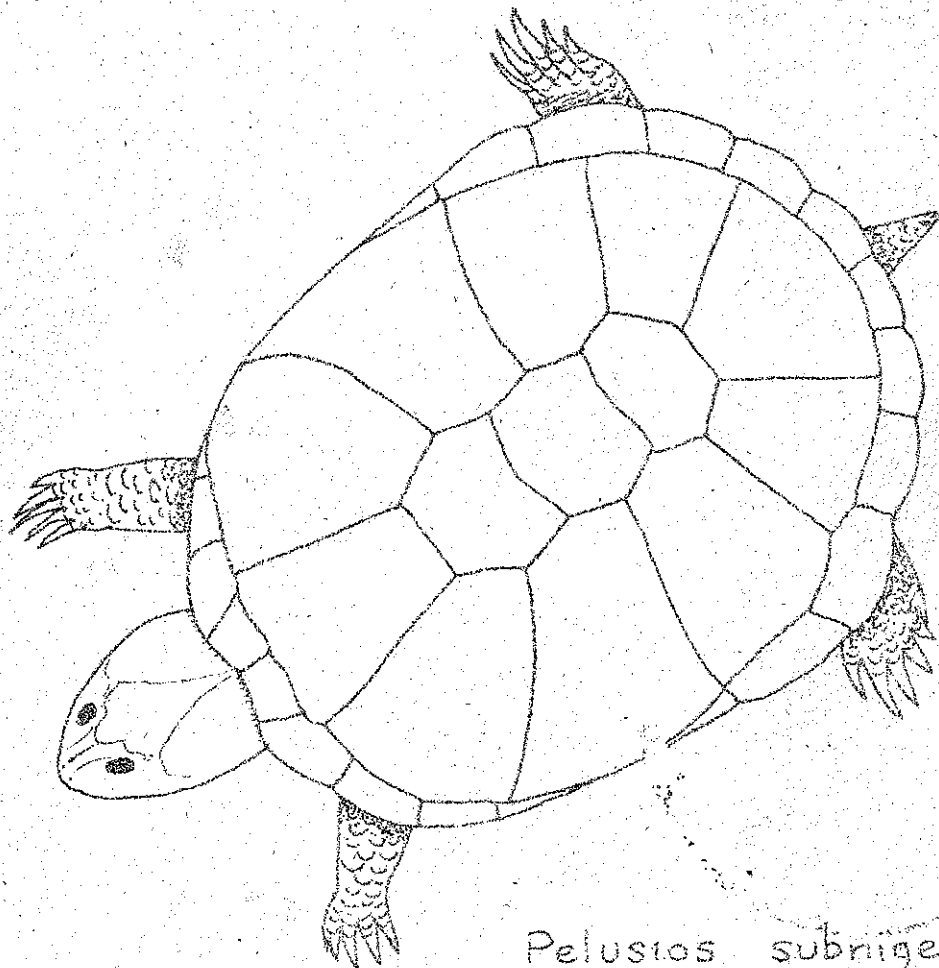


H.A.R. JOURNAL



Pelusios subniger

THE JOURNAL OF THE HERPETOLOGICAL ASSOCIATION OF RHODESIA.

No. 21

September, 1963.

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NEW MEMBERS

Peterhouse Natural History Society, Peterhouse School, P.Bag 741,
MARANDELLAS, S.Rhodesia

R.Boulton, The Atlantica Ecological Research Station, P.O.Box
8305, CAUSEWAY, S.Rhodesia

B.Marsh, P.Bag 512D, SALISBURY, S.Rhodesia

NEW ASSOCIATE MEMBERS

Lieut. J.R.Rangel, R.C.N., H.M.C.S. Naden, ESQUIMALT, B.C.
CANADA.

D.J.Ball, (Reptile House, London Zoo), 13 Coles Green Road,
Cricklewood, LONDON, N.W.2., ENGLAND.

Dr. D.M.Minter, Division of Insect-borne Diseases, Medical
Research Laboratory, P.O.Box 30111, NAIROBI, KENYA.

CHANGES OF ADDRESS

D.K.Blake, Dept. of Wild Life Conservation, P.O.Box 8365, CAUSE-
WAY, S.Rhodesia. Residence: 22 Sixth Avenue, Mabelreign,
SALISBURY (Tel. 36372) (From 27th September)

A.H.Siemers, P.O.Box 555, BULAWAYO, S.Rhodesia

L.Balarin, P.O.Box 8059, CAUSEWAY, S.Rhodesia

P.S.M.Berry, Game & Fisheries Dept., P.O.Box 37, FORT JAMESON,
N.Rhodesia

P.W.Ogilvie, 9550 Faywood St., BELLFLOWER, Calif., U.S.A.

HON. TREASURER'S REPORT FOR THE YEAR 1962-63.

Balance Sheet for the year ending 31st March 1963.

Cash Balance as at 31st March 1962	£122. 17. 6.	Current Acct. Netherlands Bank	£ 6. 7. 0
<u>Capital Reserve</u>		C.A.B.S. Savings Acct.	£105. 3. 11
As at 31/3/62	£69. 10. 6.	Cash in hand	2
Less Blazer Badges sold	<u>3. 2. 6.</u>	Office Equip- ment	£48. 2. 5
	£66. 8. 0.	Blazer Badges on hand	<u>£ 6. 5. 0</u>
Less depreciation on Office Equipment @ 20% p.a.	<u>£12. 0. 7.</u>		£165. 18. 6
	£54. 7. 5.	Excess of Expenditure over Revenue	£ 11. 6. 5
	£ 54. 7. 5.		<u>£177. 4. 11.</u>
			£177. 4. 11.

Revenue and Expenditure Account for the year ending 31st March 1963

Postages	£ 1. 17. 3.	Entrance Fees and Subscriptions	£ 24. 7. 8
Bank Charges	15. 9.	Donations	£ 2. 9. 9
Stationary and H.A.R. Journal	£27. 2. 3.	Sale of Blazer Badges	£ 3. 2. 6
Subscription - Rhod. Sci. Assoc.	£ 6. 6. 6.	Interest on C.A.B.S. Account	<u>£ 5. 3. 11</u>
Subscriptions - American Herp. Societies	£10. 8. 6.		£ 35. 3. 10
	<u>£ 46. 10. 3.</u>	Balance, being excess of expenditure over revenue for the year	£ 11. 6. 5
			<u>£ 46. 10. 3</u>

Being a true and correct statement of the Accounts and Books of
the Herpetological Association of Rhodesia as at 31st March 1963.

Donald G. Broadley
Hon. Secretary/Treasurer.

I have examined the Income and Expenditure Account and Balance
Sheet of the Herpetological Association of Rhodesia. I certify
that as a result of my audit, that in my opinion the Income and
Expenditure Account and Balance Sheet are a true and proper ac-
count of the transactions of the Herpetological Association of
Rhodesia during the year ending 31st March 1963.

D. Kenilworth Blake
Hon. Auditor.

EDITORIAL

Due to a chronic shortage of articles, this issue of the Journal is far leaner than usual. My own programme of work was upset when I had to make an unscheduled visit to England for three weeks in May for personal reasons. Consequently pressure of work - administration, display and important research projects, has left me no time to prepare articles for the Journal myself. This month's General Meeting should serve to revive interest and I hope that more members will contribute articles in future.

There have been no proposals for further changes to the Constitution. Nominations for office bearers - Chairman and Secretary/Treasurer - must reach me by 21st September and should be signed by proposer and seconder. Mr. D.K.Blake is not standing for re-election as Chairman.

The Agenda for the Second General Meeting of the Herpetological Association of Rhodesia, to be held in the lecture theatre of the Queen Victoria Museum, Salisbury at 7.30 p.m. on Wednesday 25th September, is as follows:

Chairman's Address

Secretary/Treasurer's Address

Motion 1. That the Director of Wild Life Conservation be approached with a view to placing Chamaeleo marshalli on the protected list.

Proposed: D.K.Blake

Seconded: D.T.Crow

Any other competent business.

Guest Speaker

It is hoped that Bill Mitchell (Resident Biologist, Kafue National Park) will give a short talk on the recording of ecological data. This will be followed by general discussion.

It is hoped that the General Meeting will be well attended, it only occurs once every three years, so it is worth making an effort to meet other members.

Donald G. Broadley,
Hon. Secretary/Treasurer,
Umtali Museum,
UMTALI,
Southern Rhodesia.

NEW HORIZONS IN THE STUDY OF AMPHIBIANS. By Dr. J.C.Poynton.

Like the animals it studies, zoological investigation seldom stays long in one place when it is in a healthy condition. Thanks largely to the energy of Don Broadley, the state of herpetology in Rhodesia has undergone a transformation within the past few years, and as far as amphibians are concerned, the field of study is, so to speak, now metamorphosing from the swamp of taxonomic sorting and distribution mapping, and climbing onto the land to start on a quite new level of investigation. Taxonomic and distribution studies obviously had to be the main preoccupation during the pioneering and certainly exciting beginnings, but we have now achieved a sufficiently firm basis to turn more attention to the bigger and more universal problems that the amphibians set us. The new field is a challenge to anyone who takes an interest in his surroundings.

The new phase of investigation must be concerned with the way amphibians live, and with factors that make them live and distribute themselves as they do. One of the most urgent needs is to obtain a clear and detailed idea of the seasonal cycle of activity of even the most common frogs and toads. Does the species become scarce during any time of the year? If so, when does it start to become scarce; when does it start to become abundant again; is the change sudden or gradual; can the change be correlated with a change in temperature, rainfall or even barometric pressure? Does it start calling and breeding as soon as it emerges? Are there subcycles within the main annual cycle, i.e., although the species may be out all summer, is it particularly abundant after a wet spell or a hot spell, and are there corresponding fluctuations in calling and breeding? In any one area, does the activity of the species appear to be governed mainly by temperature or by moisture fluctuations? Where does the species tend to hibernate or retire in dry weather - under stones, in burrows, under water, in vegetation? In any one area, does the population remain stable year after year, or are there noticeable fluctuations in numbers? Can a reason be found for this?

Until we have been able to provide answers to these questions for at least a few species over a fairly wide area, we can claim to know little about the fauna that surrounds us. We now know the names and the main features of distribution of the amphibians at least in Southern Rhodesia (a monograph of the amphibians of Southern Africa will be available in a few months' time), and we also know a reasonable amount about their breeding habits, thanks mainly to Dr. Walter Rose and Dr. Vincent Wager. But when it comes to seeing the fauna as it really is: a living assemblage making the best it can out of the environment of southern Africa, then we resemble the metamorphosed froglet just emerged on land, with the really big things in life still to come.

The problem can only be tackled by a number of observers resident in different parts of the country, who are prepared to mark on their calendars the progress of the seasonal activity of the amphibians that they know. A record of even a single species, the common frog Rana angolensis or the common toad Bufo regularis, would be invaluable. It would, however, be just as well to check on the identity of the species by sending a specimen to Don Broadley or myself, and to know how to distinguish that particular species from any other species that might resemble it closely. A familiarity with the calls is the surest way of being able to distinguish between morphologically similar species. Possibly some sort of cyclostyled form could be drawn up during the H.A.R. General Meeting in September, which would be a help in recording the information relating to questions such as those posed above, and would also greatly help in the sorting of the information by the person to whom the forms could be returned.

The tadpole stage of our study of the southern African Amphibia has had its ups and downs, but it has fed on the labours of many fine workers, and the stage has ended with a real flourish. Now we are clambering out into a new world, and face new vistas and new problems. Let us see to it that progress in this new stage at least equals the spurt that brought about the recent metamorphosis.

A NOTE ON THE ECOLOGY OF ATRACTASPIS BIBRONII. By D.G. Broadley

Bibron's Burrowing Adder is common in Central Africa, but it is infrequently encountered due to its fossorial and nocturnal habits. Little has been published on the ecology of this species apart from occasional records of stomach contents. The following observations are published in the hope that other members will investigate the 'lairs' of these snakes.

During the day the Burrowing Adder shelters in its burrow, which is usually situated under a stone, although a concrete slab or a log is often used. During the afternoon, when the stone is warmed up by the sun, the snake moves up into a shallow chamber beneath it and 'basks' in the warmth transmitted by the stone. If the stone is overturned, the snake dives down its burrow, which leads to a lower chamber about a foot below the surface.

This species is most active during the rains. It emerges at dusk to hunt and its prey consists largely of sand lizards and small rodents, which are presumably captured while sheltering in their burrows. Small snakes and lizards, particularly fossorial species, are frequently eaten. Among the snakes recovered from stomachs of Atractaspis bibronii are: Mehelya nyassae; Psammophis angolensis and Aparallactus capensis.

UMTALI MUSEUM EXPEDITION TO THE CHIMANIMANI MOUNTAINS -
NOVEMBER 1962. By D.K.Blake.

Aim

To establish whether or not certain forms, which occur in isolated mountain ranges to the north and south of the Chimanimanis, actually occur within that range. This applied especially to the herpetofauna, a group which had only been collected on three previous expeditions and in all cases very little material was collected.

Situation and Topography

The Chimanimani Mountains lie on the Eastern Border of Southern Rhodesia, forming a natural barrier between this territory and Mozambique. The mountains themselves are approximately twenty miles long in a north-south direction and some ten miles wide in an east-west direction. There are several ranges (running north-south) which rise from the eastern coastal plain to a maximum height of 8004 feet and drop to the central plateau of S. Rhodesia (c. 4000 feet) in the west.

The natural consequence of the steep eastern escarpment is that the area has in excess of 100 inches of rain annually.

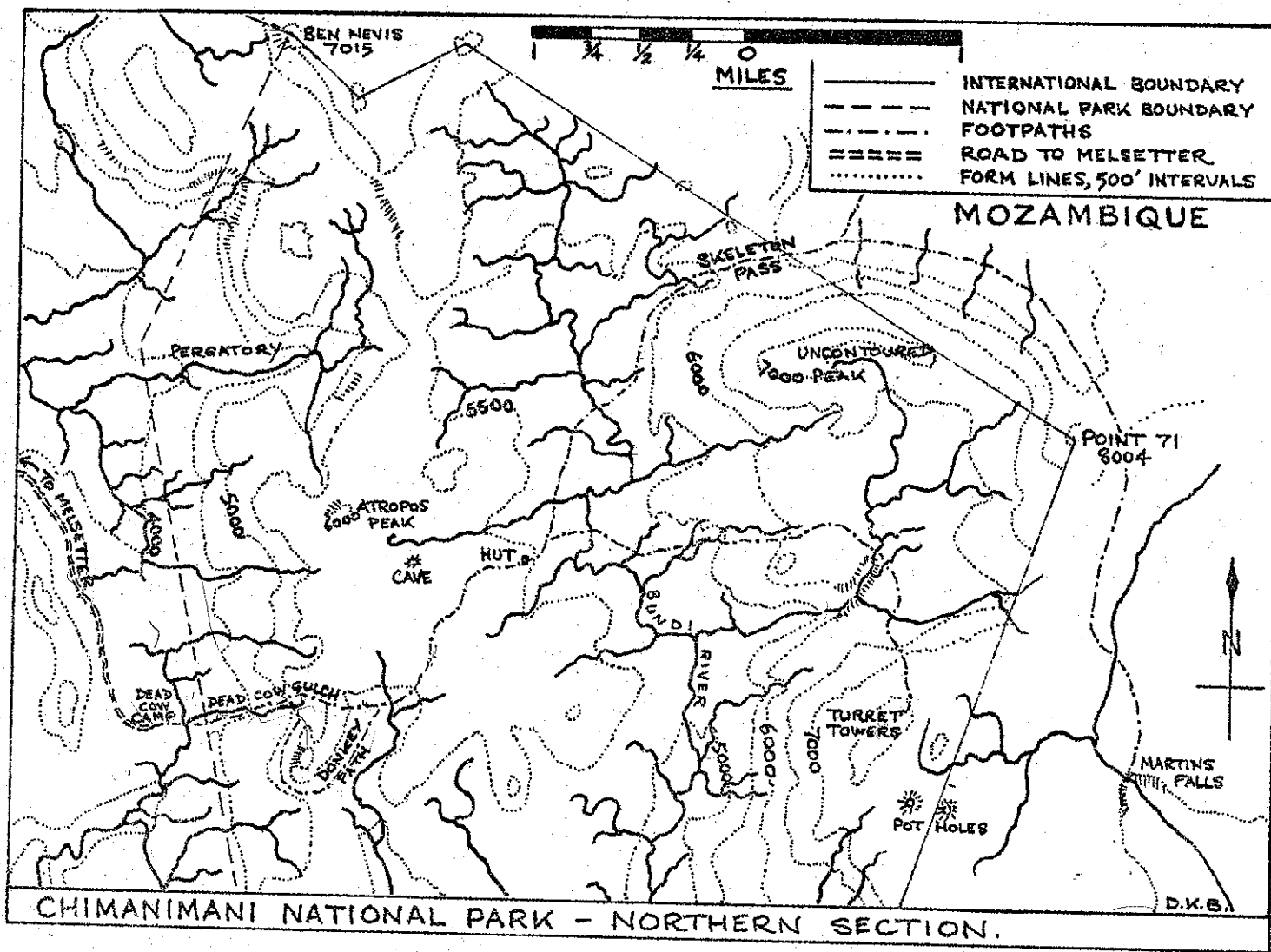
The country is extremely varied, consisting of towering rocky peaks, outcrops and cliffs, interspersed with rolling hillsides and flat grassy plains, into which streams have cut deep gullies and ravines.

The lower slopes are covered with Brachystegia woodland, but this gives way, with rising altitude, to grassland, interspersed with patches of stunted Brachystegia and Protea scrub. There are several patches of forest in the more sheltered areas - relics of a time when the whole area was heavily forested.

General Account

Don Broadley and myself, assisted by two African skimmers, finally got the VW van packed up and were able to leave Umtali at 9 a.m. on Sunday the 11th of November. After a drive of approx. two and a half hours, we arrived at Melsetter, after calling in at the house of the Honorary Warden, Mr. John Ball, to inform him that we were going in to the National Park. At Melsetter we left the main road and set off down through the Wattle plantations, calling in at the manager's house to check on the availability of porters for the following morning.

We finally reached Dead Cow Camp at 12.45, this was the end of the road, from here on it was foot-slogging, straight up! After a quick lunch Don and I set off for the ridges on the south side of Dead Cow Gulch. We worked our way along the rocky ridge, shooting the additional dozen specimens of Platysaurus ocellatus that Don required to give him a long enough series for statistical treatment. It was warm work, as the whole area had been suffering from drought for some three months, a long time for this part of the country. Other lizards obtained here were Agama kirkii and Gerrhosaurus flavigularis.



We now worked our way up the mountainside to our left and shortly before reaching the Donkey Trail, I discovered one of the largest smelting sites we had ever seen. This is probably a bantu iron-smelting site chosen for its favourable winds, the ore being brought from some distance. We returned to camp via the Donkey Trail. After an early supper and a quick scout around the stream in search of frogs, we retired to bed to be ready for an early start.

12th November

We rose early, had a quick breakfast and made up the packs for the porters. We were ready to move off by 6 a.m., but no porters had materialised. The skimmers set off to check the rodent traps that they had set the previous day and we scouted around the fire-breaks through the wattle. Finally at 8 a.m. three porters arrived - this meant two trips each for them and the skimmers. Don and I followed up slowly, checking for frogs along the stream, and reaching the Mountain Club Hut at about 10.30, after meeting our porters going down the trail to collect their second loads. This hut, consisting of two large dormitories and a communal lounge-dining room, with a small 'galley' equipped with gas stoves, was to prove a boon as it meant that after the rains broke we would have dry quarters at night.

After lunch, we set off down into the Bundi Valley for a quick reconnaissance. Here we caught our first snake, a young Psammophis crucifer. We worked our way up to the headwaters of the Bundi, where the exploration of a small cave behind a waterfall revealed nothing but mud. We proceeded downstream, collecting a series of Rana fasciata in the grass, until we were opposite the hut. When darkness fell we checked the reed beds, collecting Hyperolius swynnertoni and H. nasutus. Kassina senegalensis was collected here, but these were hiding around the edges of rock pools and were hard to locate.

13th November

After an early start, we walked down into the Bundi Valley and then climbed up onto the saddle above 'Purgatory', on the way we collected Lygodactylus capensis, Mabuva v. varia and Mabuva striata (on rocks). We decided to work back along the ridge until due west of the camp. The country was extremely scenic, but devoid of life because of the drought. On reaching the western face of the hill we later christened 'Atropos Peak', I decided to go straight up and over the top as the cliff was a bit too sheer for my liking. Don, however, decided to proceed (he has a mania for crawling around cliffs), but he eventually joined me on the top, as the cliff had become impassable and he was forced to ascend. While climbing up, he almost put his hand on a Berg Adder (Bitis atropos) coiled up behind a tuft of grass in the traditional manner.

We checked a dry patch of forest and an underground stream, where Don had previously found a single specimen of what appeared to be an undescribed species of Arthroleptis, but we again drew a blank - the only frog present being the ubiquitous Rana angolensis. We were now due west of the hut, so we decided to head back as I had ripped the sole off my boot.

A scrub-filled depression on a bleak hillside attracted our attention and closer inspection revealed an adit running down-hill from the bottom of the depression. Fortunately we had torches with us and were able to explore; we went in about 100 feet, having to wriggle through some sections of the tunnel on our stomachs, although in other places we could stand upright. Surprisingly, we only got one bat, although the situation looked ideal. Low rumbles were at first mistaken for the sound of bats in more remote caverns, but shortly afterwards a trickle of water reached us and confirmed that the rains had broken at last - in the form of a heavy thunderstorm. We crawled back to the entrance and waited for the storm to abate, here luck was with us, for peeping out of crevices in the wall of the cave were several of the Arthroleptis which we were looking for. As the specimens taken so far were all from subterranean caves we promptly christened them 'troglo-dyte frogs', which rapidly became abbreviated to 'trops'. This species apparently hibernates in caves, later we found them under stones on the slopes of the Bundi Valley.

That afternoon we did a quick reconnoitre up the path towards Turret Towers, with myself in tackies (rubber-soled canvas shoes), not ideal footwear for this terrain. Here we found hail-stones lying in heaps 3-4 inches deep on the path some four hours after the storm. We returned via the Bundi River, which flows through a gorge under a terrific conglomeration of rock. One of the skimmers was sent back to the van for my spare boots. These had leather soles and were to give me trouble for the rest of the trip.

14th November

We rose early and set out for Turret Towers, towering some 2400 feet above us. The first capture was a Slug-eater (Duberria lutrix rhodesiana) basking on the path. We stopped for a well-earned rest on the high plateau below the Turrets, here Don caught a frog which he could not identify. This subsequently proved to be Rana grayi, but with the markings typical of the South African populations. We had taken a typical Rana grayi rhodesiana with a uniform red dorsum in Dead Cow Gulch. We now tackled the main massif of the Turrets, a straight climb of some 1200 feet. It was not long before I was stopping for frequent rests, the magnificent views provided a suitable excuse! We did not climb to the actual summit of the Turrets, but skirted them and dropped down into the valley behind. Here on rock slopes covered with trickling water we captured 20 specimens of Bufo vertebralis subsp., a form first found by the Cape Town University Expedition in 1958. These were located by their high-pitched breeding call, some were taken in amplexus in shallow pools. The dorsal skin of these toads is very spiny.

We searched for the potholes which lie one on each side of the border, but had to take shelter from a terrific thunderstorm. We located the pothole on the Portuguese side and began the descent. The potholes are obviously nothing but a fault in the mountain and are of fairly recent origin.

We worked our way down a ravine through thick scrub until we reached a series of caves formed by falling boulders. The interiors of these were extremely dangerous as all the rocks were loose and when stepped on were likely to vanish, leaving gaping holes. Some thirty feet below us we could see a pool, from which we could hear the water trickling still further down. The place was devoid of herpetofauna, being too cold and wet. We left the Portuguese pothole and proceeded to the one on the Rhodesian side. As it was getting late we did not descend, but returned to the plateau behind the Turrets, where we captured several Xenopus l. laevis in a meandering stream. Some Cordylus c. rhodesianus and Mabuya striata were collected near the top of the peak. We set off down the mountain late and arrived back at the hut in the dark just after the rain had started again.

15th November

We decided to take things easy after the exertions of the previous day. In the morning we explored several patches of forest, with the idea of returning that night in search of Dwarf Chameleons (Chamaeleo marshalli). Don nearly trod on another Berg Adder and several other snakes were found under stones on the way back to the hut. After lunch we proceeded over the kopje to the north of the hut and then on to the plateau adjoining Atropos Peak. Here Don excelled himself in capturing four Bitis atropos, one of which I had even walked past. We also got Duberria, Crotaphopeltis and Psammophis crucifer. That evening we discovered that both our torches must have been left switched on in the rucksacks the previous day, with the result that all the batteries were flat. We decided to visit Melsetter the next day to buy some more.

16th November

During the morning we shopped in Melsetter and paid a quick visit to the Bridal Veil Falls. We returned by the Donkey Path, but decided that it was easier to go straight up long gully at the head of Dead Cow Gulch. In the afternoon I went for a bath down in the Bundi. I shot a Dabchick (Podiceps ruficollis) which got caught up in a patch of weeds, so I swam for it - on the way back I nearly seized up in the icy water.

17th November

After a long and arduous tramp - along the Bundi Valley, over Skeleton Pass and then through undulating grassland intersected with forested stream courses - we reached Martin's Falls on the Mozambique side of the Chimanimanis. This waterfall drops some 1500 feet in two falls and the river then flows through a magnificent gorge. On the return journey we collected Rana grayi and Rana (Ptychadena) uzungwensis around shallow pools on the path. In the patches of forest we got Arthroleptis x. xenodactyloides and I suspect that these forests would yield Dwarf Chameleons if examined by night. We were hurrying along the path in light rain when I saw a Berg Adder narrowly miss Don's left calf in a vicious strike from a tuft of grass. It was quickly captured. We reached the hut to find it had been invaded by a party of eight students.

from the University of the Witwatersrand.

18th November

We left early for the high plateau on the way to Turret Towers in a heavy mist which soon soaked us through. Patchy mist persisted all day and rather spoilt things on the plateau, but I did catch a Brown Water-Snake (Lycodonomorphus rufulus) swimming in a pool and we also collected Rana grayi and Bufo vertebralis subsp. We decided to descend into the 'Gloomy Kloof' - a deep ravine fed by several waterfalls at one end. We managed to get down one side and worked our way almost to the foot of the falls, but our way was blocked by a pool completely filling the ravine and overhung by rock - an ideal lair for a small 'Loch Ness Monster'. Here we could hear a small frog calling, in the moss along the edges, but we were unable to find any. We returned to the hut tired and wet.

19th November

We worked our way via the Bundi Valley up onto the saddle above 'Purgatory', this forested valley with very thick undergrowth was so named by the Outward Bound School, who had much difficulty in hacking their way through it. We worked our way down the mountainside, with the intention of ascending the valley leading in from the south and so out. However, after struggling through thick matted bracken, Smilax (a diabolically thorny creeper which rips your legs to pieces) and thick bush, we decided to give up the struggle. We battled through to the foot of Atropos Peak and climbed straight up the cliff, picking up a Wolf Snake (Lycophidion c. capense) en route.

That evening, accompanied by Paul Venter (one of the Wits students) we set out for a patch of forest near the top of Dead Cow Gulch in search of Chamaeleo marshalli. After two hours we had not found any and could only come to the conclusion that they do not occur on the western side of the Chinanimanis. We returned in swirling mist that made it difficult to pick out the path.

20th November

In the morning we awaited the arrival of the Outward Bound School in order to show them some Berg Adders. We returned to the adit and explored it further. We found no more 'troggs' - either we had caught them all or they had dispersed with the advent of the rains. Heavy rain washed out the rest of the day.

21st November

We climbed Ben Nevis with three of the students and found snakes plentiful, the first captured being a large and irascible female Night Adder (Causus rhombeatus), three more Berg Adders were taken. Ben Nevis gives one of the finest views in the whole Chimanimani Range. To the north-east lies Rocklands, part of the Martin Forest Reserve, and immediately to the north is the Musapa Gap - a great cleft in the eastern escarpment. To the north-east one looks out over a series of isolated peaks to the Mozambique plain. To the south lies the panorama of jagged peaks and green plateaux and valleys that make up the Chimanimani Range.

Cordylus c. rhodesianus is very common on the summit of Ben Nevis. We returned to the hut in time for lunch. In the afternoon Don searched the slopes of the Bundi Valley in a last desperate bid to find Amplorhinus multimaculatus, a snake which we had expected to find, but which had so far not turned up. To confound me completely he captured one crawling through the grass just south of the hut just as the sun was going down. He also collected a few more Crotaphopeltis and Psammophis crucifer, bringing the day's bag of snakes to 14 and the total to 50.

The porters arrived late the next morning, but we finally got everything down to Dead Cow Camp. Just after leaving the camp Don spotted an Eastern Green Snake (Philothamnus hoplogaster) crossing the road, stood on the brakes and leapt out to catch it. Shortly afterwards we stopped again for an Agama, Don went in search of it and disturbed a large bright green lizard which shot into thick cover. His first thought was Chamaesaura macrolepis (the only lizard recorded from the Chimanimani which we failed to get), but the colouration was wrong. The fleeting glimpse suggested a gerrhosaurid or lacertid about a foot long, resembling nothing known from this part of the world!

Acknowledgements

Thanks are due to the Department of National Parks for permission to collect zoological specimens in the Chimanimani National Park and to the Rhodesia Wattle Company for providing porters. Paul Venter kindly contributed a number of useful specimens.

Systematic List of Herpetofauna collected * = endemics.

REPTILES

Sauria

Hemidactylus mabouia
Lygodactylus capensis
Agama kirkii
Mabuya varia varia
Mabuya striata
Gerrhosaurus flavigularis
Cordylus cordylus rhodesianus
Platysaurus ocellatus*

Serpentes

Lycodonomorphus rufulus
Lycophidion c. capense
Philothamnus hoplogaster
Duberria lutrix rhodesiana
Crotaphopeltis h. hotamboeia
Dispholidus t. typus
Amplorhinus multimaculatus
Psammophis crucifer
Aparallactus c. capensis
Causus rhombeatus
Bitis a. atropos

AMPHIBIANS

Xenopus l. laevis
Bufo regularis
Bufo vertebralis subsp.*
Breviceps adpersus
Rana angolensis
Rana fasciata
Rana grayi rhodesiana

Rana (Ptychadena) uzungwensis
Phrynobatrachus u. mababiensis
Arthroleptis x. xenodactyloides
Arthroleptis sp. nov.*
Kassina senegalensis
Hyperolius swynnertoni
Hyperolius nasutus

SOME MISCELLANEOUS OBSERVATIONS FROM UMTALI SNAKE PARK.

By A.C. Newman.

A four foot Olive Grass-Snake (Psammophis sibilans), which has been in captivity for six months, is feeding well on mice. It ignores agamas and skinks. An adult white mouse was taken behind the shoulders, the rodent was dead in less than a minute, probably crushed to death. A quarter of an hour later another adult white mouse was taken, this time by the head, the snout of the rodent protruded from the side of the snake's mouth. This mouse took at least three minutes to die and it was kicking violently to the end. At no time did the snake use its coils for constriction. Other Olive Grass-Snakes have disgorged rats after capture, sometimes the following day, not once have they been observed re-swallowing their meals.

The Mlanje Water-Snake (Lycodonomorphus mlanjensis) referred to in the last H.A.R. Journal has taken a platanna offered by our editor, Don Broadley. Since then platannas (Xenopus l. laevis) have formed a regular part of its diet. Two more small barbel have been taken tail first; in one case the fin protruded through the snake's body with no ill effects.

A fifteen-inch Crocodile aquired on the 8th of February this year is feeding well on platannas and dead fish. The platannas are caught alive and chewed in a softening-up process before swallowing. Dead rodents also form part of its diet. It has just recovered from what would seem to be pneumonia, its nostrils were clogged with dry mucus and the eyes were running (literally 'crocodile tears'), one of the sulpha drugs was used as a cure.

A four-foot crocodile, which is a good feeder, also uses the chewing process, during which bones can be heard breaking. It shares a pit with a four-foot eel, three 21-inch barbel, six small barbel (6-8 inches), one five-foot leguaan and two eighteen inch leguaans (Varanus n. niloticus). Once a week a supply of small dead fish are thrown into the water, these are eaten by all. Platannas are also put in the pit, these are eaten by the croc, leguaans and bigger barbel. The crocodile has not been observed to attack any of its pond mates. Its diet has included fish, toads and frogs of all kinds, dead rats, mice and mole-rats, dead birds and chickens, an occasional dead snake, bats, raw meat and liver. Hanging an electric light above the water at night attracts moths and beetles, which fall into the water and are readily taken. The eel has an unusual habit of lying belly-up under the water, particularly on cold days, probably sunbathing.

Terrapins (Pelusios sinuatus), sharing the moat with bream and small barbel, eat the segments of millipedes cleaned out of the rock monitors cage; they also eat the dead insects and small toads from the Giant Chameleon's cages. We often hear them bumping against one another and the wall when fighting over a tasty morsel under water. Dead snakes and lettuce leaves form part of their diet.

An eighteen-inch Mlanje Water-Snake was caught in the Old Umtali Irrigation Furrow on 2nd April, it was gorged on a frog (Rana oxyrhynchus). It was put in the cage with the other Mlanje Water-Snakes, some time that night it disgorged its meal. On the evening of the 3rd April at 8.15 p.m. it was observed with the big female snake which has been doing so well. The beginning of the mating was not observed and no movement was observed while the snakes were under observation. They parted 15 minutes after being first seen.

An unusual mating took place between a male Bush-Snake (Philothamnus semivariegatus) and a female Western Green-Snake (Philothamnus i. irregularis), they were both about twenty-one inches long, but the female's girth was nearly twice that of the male. They were in the large pit with at least half-a-dozen of each species with them.

A two-foot Rock Monitor (Varanus e. albigularis) is doing well in a cage. Its diet has been very varied, consisting of one dead and very smelly quail, dead chickens and birds, rodents, millipedes, grasshoppers, dead snakes, a bat and snails, which form its main food supply. The chin rubbing on millipedes described by Mr. M.G. Jeffries has not been observed in this specimen. All snails taken have been bashed about until the shell is broken. The thickness of the tail does seem to denote condition, as this monitor was gaunt and docile when acquired and its tail was concave. The tail is now round and the belly distended sideways. Although it can still be stroked, it doesn't hesitate to use its tail when handled.

A six and a half foot Banded Cobra (Naja h. haje), kept in captivity for over two years, went blind nine months ago. Not having the heart to destroy it, I left it in a cage by itself. Seven months without food, although it did drink, made it very thin. After surviving in this state so long, it was decided to try and feed it with a cleft stick. This didn't prove satisfactory, as its lunges knocked the toad out of the stick. But this solved the problem, as the cobra seemed to feel the toad hopping around and was able to catch it after a few misses. Feeding is now no problem, and if the toads sit quietly by the glass, a few light taps on the glass alongside the toad attracts the snake. The remarkable change in its condition in the last two months is hardly credible. It has shed its skin once, is plump and shiny, very active and will 'hood' when prodded with a stick. Platannas are taken just as readily as other frogs by this and five other cobras.

A four and a half foot Banded Cobra affectionately called 'Red-mile' was fifteen inches long when caught two and a half years ago, in addition to toads it takes platannas and dead bream.

Three out of eleven Black Mambas (Dendroaspis p. polylepis) caught at Old Umtali have been heard to expel air in the Cobra manner, not quite so loud but still audible. Is this a male characteristic?

There seems to be a prevalent condition of all snakes here in the Eastern Districts of Southern Rhodesia, namely shrinkage. The phone rings, "Please would you come at once, there's a twelve foot cobra or a nine foot boomslang in the garden." Pushing out with visions of capturing a world record, one arrives and obtains (if lucky) a six foot cobra or a four foot boomslang. When viewing the reptile after capture, there is the inevitable protest - "Oh! But it was twice that size when we first saw it." With a wry smile you thank them for the snake, maybe next time it will be a big one. On second thoughts it might be something to do with Homo sapiens and not the snakes at all!

On the 22nd August, during the Manicaland Agricultural Show at about 10.30 a.m., a large tortoise (Testudo pardalis babcocki) was observed trying to eat a 21-inch Western Green-Snake (Philothamnus i. irregularis). This was pointed out by a spectator, on closer examination the tortoise was seen to be chewing the snake and it had already bitten off some skin and flesh about midway down the body, while holding the snake down with one of its front feet. This made the snake strike at the tortoise and bite it twice above the right eye, drawing blood. Eventually the snake managed to wriggle free and the tortoise spent the rest of the day trying to catch other snakes, including two house snakes that were in the pit. The following day plenty of lettuce was put in the pit and no more snake-eating was attempted, as all the tortoises were busy eating lettuce. The unfortunate Western Green-Snake died during the night.

On the 26th August on the banks of the Odzani Furrow, a 27-inch Western Green Snake was seen starting to swallow a toad. On being picked up it offered no resistance and continued with its meal. From the furrow to the Snake Park, a distance of some 300 yards, the snake was supported on both open hands and put into the pit. While being carried it continued with its meal and on arrival at the Park only the back legs were visible and these soon vanished. Its meal over, the snake climbed into a small shrub and mingled with others of its kind.

An 18-inch Spitting Cobra (Naja nigricollis mossambica), captured at Old Umtali on 4th September, disgorged a Bronze Mannikin (Lonchura cucullata scutata).