H.A.R.
JOURNAL

Hylambates maculatus

THE JOURNAL OF THE HERPETOLOGICAL ASSOCIATION OF RHODESIA.

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NEW MEMBERS

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(Exch. Pubs.)

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MEMBERS ARE ONCE MORE REMINDED THAT THE HON. SECRETARY SHOULD BE NOTIFIED OF ANY CHANGE OF ADDRESS AS SOON AS POSSIBLE.

HERPETOLOGICAL ASSOCIATION OF RHODESIA.

SUBSCRIPTIONS DUE ON 1st APRIL 1963.

MEMBER'S NAME.....

SUBSCRIPTIONS DUE.....

Hon. Treasurer:
D.G.Broadley,
Umtali Museum,
UMTALI, S.Rhodesia.

EDITORIAL

The results of the postal vote on the proposed changes in the H.A.R. Constitution were as follows:

Amendment 1. To delete the second part of clause 2(g) of the Constitution. Motion failed to obtain the necessary two-thirds majority. Voting was 13-8 in favour of the proposal, with 17 abstentions.

Amendment 2. Clause 5(a) Add - 'Life Members shall subscribe £15 (£7..10s. if over the age of 60); Associate Life Members shall subscribe £7..10s(22 Dollars 50 cents U.S.).'Motion carried by 19 votes to 2, with 17 abstentions.

Amendment 3. Clause 11 - amend to read - 'The official organ of the Association shall be the 'Journal of the Herpetological Association of Rhodesia', published twice yearly and circulated to all members.' Motion carried by 18 votes to 3, with 17 abstentions.

Copies of the revised Constitution are being distributed with this issue of the Journal. Any proposals for further constitutional changes must reach me before the end of July and must be signed by both proposer and seconder.

A General Meeting of the Association will be held at 7.30 p.m. on Wednesday the 25th September in the lecture theatre of the Queen Victoria Museum, Salisbury. This is the day before the Zoological Society's Symposium on African mammals. I considered trying to organise a one day symposium on African herpetology, but have come to the conclusion that more will be achieved with informal discussions on zoogeographical and ecological problems.

I anticipate that an expedition to the escarpment foothills in Mozambique will start out about 30th September, the main objective being rupicolous lizards. Later in the season an expedition will take in Gorongoza Mountain and the Mozambique Plain, when more emphasis will be placed on the collection of amphibians. It is also hoped to fit in field trips to the Honde Valley and the Lusitu Valley during the 1963-4 season. Any members interested in joining expeditions should contact me well in advance to facilitate planning.

A survey of the membership list shows a total of 76 members, made up as follows:

Ordinary Members	35 (18 in arrears)
Honorary Life Members	5
Associate Members	35 (8 in arrears)
Life Associate Member	1

I would remind all members that subscriptions for 1963-4 fall due on 1st April and that membership lapses when subscriptions become more than one year in arrears.

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

NEW REPTILES FROM RHODESIA. By D.G.Broadley

The following five new forms were described in the Occasional Papers of the National Museums of Southern Rhodesia , No. 26B, published on 31st December 1962. The diagnoses and distributions of these reptiles are given here so that members can add them to their check-lists.

Cordylus warreni regius Broadley

Diagnosis: A race intermediate in many respects between C. w. warreni of Zululand and C. w. mossambicus of Gorongoza Mtn., Mozambique, but also showing affinities with C. w. barbertonensis of the eastern Transvaal. The dorsal scalation is similar to that of mossambicus, but the scales are rather larger and more spinose, in 24-26 longitudinal rows (28 in mossambicus, 20-22 in warreni). The development of spines on limbs and body is similar to that in warreni, but the new form has the more strongly depressed head of barbertonensis. It would appear that regius attains a greater size than the other races and the brilliant orange or yellow lateral and ventral colouration in the males seems to be peculiar to this form. Other distinctive characters are the shape of the preocular and the tendency towards eight occipitals (not more than six in other races).

Habitat: Granite outcrops between 3,000 and 4,500 feet.

Distribution: Type locality - Dora, 8 miles SSW of Umtali. Extends southeastwards to Modima (lower slopes of Vumba Mtn.) and Chinyamanda(on the southern rim of the Burma Valley near the Mozambique border).

Platysaurus ocellatus Broadley Chimanimani Flat-Lizard

Diagnosis: This new species does not seem to be closely related to any of the known forms of Platysaurus, differing from all in the complete absence of light longitudinal stripes in both adults and juveniles of both sexes. It agrees with P. capensis in having the sides of the neck and the flanks covered with small subuniform granules no larger than those on the dorsum, also in the length of the adpressed hind limb, which reaches the neck, but it differs from this form in the presence of strongly keeled scales on the upper surface of the limbs. The transverse ventral count of 12-14 is lower than that in all other forms except P. mitchelli (12-14) and P. guttatus pungweensis (14-16). The occipital is very variable in this form. In half the series the occipital is absent (as in P. capensis), in the others it varies in size, making contact with the interparietal in four specimens (as in P. g. rhodesianus, etc.).

Habitat: Metamorphosed quartzite outcrops at about 5,000 feet. Replaced at higher altitudes by Cordylus c. rhodesianus.

Distribution: Known only from the type locality - western slopes of the Chimanimani Mountains above Dead Cow Camp, 8 miles east of Melsetter, S.Rhodesia.

Platysaurus guttatus subniger Broadley

Diagnosis: This form is very closely related to P. guttatus rhodesianus, with which it agrees in size, but it may be distinguished as follows:

Rostral and frontonasal in broad contact in 100% of 76 specimens examined; upper labials 5 or 6 in 90.5%; chest and belly uniform black in males.....P. g. subniger

Rostral and frontonasal separated by nasals in 78.6% of 149 specimens examined; upper labials 4 in 70.9%; chest and belly not uniform black in males, suffused with green, blue or terracotta.....P. g. rhodesianus

Habitat: Granite outcrops between 3,000 and 6,000 feet.

Distribution: Umvukwes, Trelawney and Lake McIlwaine eastwards to southern Mtoko District. Its southern limit is the Salisbury - Macheke - Inyazura - Umtali watershed. Type locality - Watsomba, 16 miles NNW of Umtali, S.R. It occurs at 6,000 feet in Inyanga District, at higher altitudes it is replaced by Cordylus c. rhodesianus.

Platysaurus imperator Broadley Emperor Flat-Lizard

Diagnosis: This species is immediately distinguishable from all other forms of Platysaurus by its great size and striking colouration. Adult males measure 106-146 mm. from snout to vent, compared with 83-127 for P. g. rhodesianus, previously the largest known form. Adult females measure 97-120 mm. from snout to vent, compared with 73-104 mm. for rhodesianus. The red and yellow colouration of the males is distinctive, as are the broad brilliant yellow stripes on the head and nape of the females (in other forms the stripes are cream in colour and not greatly emphasised anteriorly). The average transverse ventral count is higher than in other forms: P. imperator has 21-28, mean for 54 specimens 23.4; P. g. rhodesianus has 18-26, mean for 149 specimens 21.0; P. g. subniger has 18-22, mean for 76 specimens 19.9; counts are much lower in the smaller forms of Platysaurus.

Habitat: Granite and paragneiss outcrops between 1,500 and 4,000 feet.

Distribution: Northern Mtoko District of Southern Rhodesia and adjoining Mozambique, extending west into Mrewa District. Type locality - Matowa, Mtoko, S.R.

Natriciteres olivacea bipostocularis Broadley

Dianosis: A montane race, close to N. o. uluguruensis, but distinguished therefrom by its two postoculars in 100% of 21 specimens examined (three postoculars in 93% of 124 uluguruensis; in 96% of 49 olivacea). The reduction from 17 to 15 dorsal scale rows frequently takes place in advance of mid-body (mid-body scale rows 17, rarely 15 or 19 in uluguruensis).

Distribution: Type locality - Abercorn, Northern Rhodesia. Extends west to the highlands of Angola and south-east to Isoka, N.R., intergrading with uluguruensis in Nyasaland and south-west Tanganyika.

PSAMMOPHIS SIBILANS (Linnaeus, 1758) - A TAXONOMIC DUSTBIN.

By D.G.Broadley

The Psammophis sibilans group has been a herpetologist's nightmare for two centuries and will remain so for some time to come. Loveridge revised the genus in 1940 and recognised six races of P. sibilans, these were schokari, sibilans, phillipsii, notostictus, trinasalis and leightoni.

Meterns (1955) showed that the western forms notostictus and leightoni were full species and that trinasalis was a northern race of the latter.

Marx (1958), after a statistical analysis of Egyptian material, demonstrated that P. schokari was a full species, sympatric with P. sibilans.

Laurent (1960) pointed out that Loveridge had recorded P. s. sibilans and P. s. phillipsii from the same localities in Equatorial Africa and he restored the latter to specific rank, this form being restricted to rain forest. This leaves P. sibilans a monotypic species.

FitzSimons (1962) again treats leightoni and trinasalis as races of P. sibilans, but his distribution maps 46 and 47 clearly show that sibilans and trinasalis are sympatric in the northern half of South West Africa and in Bechuanaland, so that they cannot be conspecific. Morphologically they are very different.

Although Psammophis sibilans sensu Loveridge 1940 has now been split into five full species, the unravelling of this group has hardly begun and several species are still lumped together under the taxon 'Psammophis sibilans.'

Loveridge has restricted the type locality of P. sibilans ('Asia' = Africa) to Egypt, which seems probable, but needs confirmation by examination of the type, which is still in existance although over 200 years old. Marx (1958) has analysed the data for 52 Egyptian P. sibilans, two of which are now in the U tali Museum. It is extremely doubtful whether these snakes are conspecific with the 'Olive Grass Snake' which is so common and widespread in south-eastern Africa.

A comparison of Psammophis sibilans of Egypt with the 'Olive Grass Snake' (Psammophis sp.) of the Rhodesias.

	Egypt	N & S. Rhodesia
Series	52	194
Ventrals	159-172	156-184
Subcaudals	100-117	87-108
Lower labials	11	9-10, very rarely 8 or 11
Lower labials in contact with anterior sublinguals	4-5, usually 5	4, very rarely 5
Maximum snout-vent length	982 mm.	1253 mm.
Tail length / Total length	0.31 - 0.34	0.26 - 0.31
Dorso-lateral stripes	present in 90%	absent
Labial spots	absent	present

The 'Olive Grass-Snake' apparently occurs from the Sudan (Sweeney) throughout eastern Africa to Natal, westwards through the Congo and the Rhodesias to the Kalahari. It is the largest form, attaining a length of six feet, and it is also more robust than the others. Within the range of the 'Olive Grass Snake' occur several populations which show closer affinities with the typical striped P. sibilans of Egypt.

Mertens (1955) illustrates in Fig. 68 a male 'P. sibilans'from Tsissabschlucht, S.W.A. This snake has 164 ventrals and 105 subcaudals; it has a slender build and well defined dorso-lateral stripes like P. subtaeniatus, but the head is covered with a sharply defined net-like pattern, which continues onto the anterior portion of the bady as a ladder-like pattern. This form is certainly poles apart from the 'Olive Grass Snake.' A similar snake occurs in Ghana and has been illustrated by Cansdale (1949).

A population in the Abercorn - Mporokoso area of Northern Rhodesia, listed as P. ? sibilans by Broadley and Pitman (1960), differs from the sympatric, but much commoner, 'Olive Grass Snake' in its lower ventral (149-159) and subcaudal (72-85) counts, head scalation and body markings, which consist of black-margined yellow chain-like markings on a greenish-brown ground. In the American Museum of Natural History there are a series of nine snakes from Lobito Bay, A gola, with similar markings to the Abercorn snakes, but with higher ventral (162-172) and subcaudal (94-105) counts.

Numerous other 'varieties' of P. sibilans have been described, but the status of these can only be settled by examination of the types, most of which are in European Museums.

Finally there appears to be a highveld form in southern Africa with an interesting relict distribution. I understand that it is common on the Rand and it is illustrated in Plate 23 of FitzSimons' 'Snakes of Southern Africa'. It is a smaller species than the 'Olive Grass Snake', with a shorter head, no labial spots, and a pair of dorso-lateral stripes. This form also occurs in Southern Rhodesia at about 5,000 feet, but is rare. It has been found at Umtali and near Marandellas (Peterhouse School). This form again has lower ventral and subcaudal counts than the 'Olive Grass Snake.'

It is obvious that this group is sorely in need of a full revision. This will take several years, for it will be necessary to examine the types in Europe, check carefully through all the references in the literature, and, most important of all, to collate the data for all available material and subject this to statistical analysis.

I shall probably expand this project to a full generic revision, for quite a lot of work has already been done on P. subtaeniatus. Specimens of any Psammophis are therefore welcome at Umtali Museum, although long series of the 'Olive Grass Snake' and Psammophis s. subtaeniatus from the Rhodesias are already available. Good series of the Transvaal and S.Rhodesian highveld form and the various 'chain-marked' and 'ladder-marked' forms are urgently required.

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TWO RARE FOSSORIAL REPTILES IN SOUTH-EASTERN RHODESIA - PREDATOR AND PREY.

By D.G.Broadley

The southeastern lowveld of Southern Rhodesia is still poorly known, but some valuable material has recently been collected by Peter Taylor (Tsetse Control, Chipinda Pools), Danie Bredenkamp

(Wild Life Conservation Officer, Birchenough Bridge) and Ian Cannell (Roads Dept., Ngundu). These collections include twelve specimens of Monopeltis sphenorhynchus and five Xenocalamus transvaalensis.

In Rhodesia it seems that each species of amphisbaenid has a different snake to prey upon it! Zygaspis quadrifrons capensis is devoured by Calamelaps ventrimaculatus, both being small species; Tomuropeltis pistillum is the prey of the equally elongated Xenocalamus mechowii. A similar relationship between Monopeltis sphenorhynchus and Xenocalamus transvaalensis was confirmed when the largest of these amphisbaenids was recovered from the stomach of a Birchenough Bridge snake.

Both these eastern fossorial reptiles show a strong tendency towards fusion of head shields. All other Monopeltis have three upper and three lower labials. The type of M. sphenorhynchus (from Inhambane, Mozambique) differed in having only two lower labials, the only character distinguishing it from M. decosteri of Delagoa Bay (= Lourenco Marques). The present series of amphisbaenids show the following variation in labial formulae:

3 upper/3 lower ('decosteri') - one Chipinda Pools specimen
3 upper/2 lower ('sphenorhynchus') - Birchenough Bridge specimen
2 upper/3 lower - one Chipinda Pools specimen
2 upper/2 lower - 9 specimens from Chipinda Pools (1); Birchenough Bridge (1); Ngundu (4); Lundi River Bridge (1); Nuanetsi (1); 40 mls S of Fort Victoria (1).

There is also considerable variation in other characters: 196-229 annuli on body, 9-10 on tail; 30-42 (16-26 dorsal + 14-20 ventral) segments in a midbody annulus; pectorals 4-6; anals 4; preanal pores 1-1; chin shields 4 (2 in one Ngundu specimen). The largest measures 269 (255+14) mm. It is probable that only one very variable species is represented here, but more material is required from the Mozambique plain to confirm this.

Xenocalamus transvaalensis used to be easily 'keyed out' from other members of the genus because it had only five upper labials, the second and third entering the orbit. There are now six specimens in the Umtali Museum from Birchenough Bridge (3); Sabi Research Station; Chipinda Pools and Lundi River Bridge. The upper labial formulae are 5 (2,3) in one snake, 5 (3) in one, 6 (3,4) in two, while two have 5 (2,3) on one side of the head and 6 (3,4) on the other! Other data: midbody scale rows 17; ventrals 187-196 in ♂♂, 215 in ♀♀; anal divided; subcaudals 27-29 in ♂♂, 22-24 in ♀♀. The largest ♀ measures 456 (425+31) mm. This species is uniform black above and white below.

SOME NOTES ON THE DIET OF VARANUS EXANTHEMATICUS. By M.G.Jefferies.

I have three Rock Monitors in captivity - a 2½ foot female from the N.Rhodesian shore of Lake Kariba, near the dam wall; a 3 foot male and a 9 inch juvenile from Katete, Eastern Province(N.R.).

The adults will eat almost any animal of appropriate size - mice, small birds, lizards (Agama hispida and Mabuya striata), toads, giant millipedes, locusts and grasshoppers, giant snails and raw liver and other meat. With live vertebrates they are very violent, shaking the victim and banging it on the floor and walls of their enclosure until it is stunned or killed. Snails are carefully cracked to remove the shell and only the fle sh is eaten. This appears to be deliberate, as pieces of shell are dropped and the body of the snail is shaken, presumably to remove other pieces. Giant Millipedes provoke rather odd behaviour. When a Monitor sees one, it rubs its chin on it as it tries to escape. After some time the millipede may be picked up and eaten. This 'chin rubbing' may last for 15 minutes. As these millipedes exude a supposedly protective fluid distasteful to predators, the behaviour may have analogies with the 'anting' behaviour of birds. I have seen the female Monitor rub her chin on a toad that she does not intend to eat, but to which she has been attracted by movement.

Inanimate objects such as raw meat and eggs are simply picked up and swallowed. A four foot Varanus I had for a short time would swallow small hens eggs, apparently taking the greatest care to avoid breaking the shell if possible. They were never deliberately crushed in the jaws.

The diet of the juvenile is probably of more interest. It was caught on 15th November 1962 and then measured 234 mm. (head and body 110 mm.). Its main food is small snails, which are swallowed complete with shells. Slightly larger snails are cracked and the shell removed before being swallowed. This diet is varied with winged termites, moths, grasshoppers and other insects. It shows little skill at catching insects and only the slow winged termites are caught with ease. Caterpillars are sometimes eaten and some are treated as the adults treat millipedes.

Most vertebrates are too large for the juvenile to tackle. Although toads that have just emerged from the tadpole stage are small enough, they have been consistently ignored by this monitor. An adult Dwarf Gecko (Lygodactylus sp.), which was placed temporarily in the vivarium, was killed by the monitor, using the shaking and banging technique of the adults, and then swallowed whole.

General health - The thickness of the tail seems to be a guide to the condition of the monitor. The adult male was caught soon after emergence from a period of aestivation and was very thin, with a concave-sided tail; it also harboured many ticks. After two months of good feeding the tail is thick and convex-sided.

The female developed a sore on the lower jaw after a month in captivity and was reluctant to eat. Procaine penicillin ($\frac{1}{3}$ c.c.) was injected into a hind leg muscle and this rapidly reduced the sore to a small spot, which lingered on for a month before disppearing. No reaction appeared at the site of the injection and the monitor's behaviour appeared to be normal.

NOTES ON THE DIET OF SOME SNAKES AT THE UMTALI SNAKE PARK.

By A.C.Newman

Lycodonomorphus mlanjensis*

A three-foot Mlanje Water-Snake, which spends most of its time in a big hub-cap full of water, was given a live barbel (Clarias gariepinus) five inches long. Being a good eater, it attacked at once, getting a hold on the left side, immediately behind the gill, it threw four coils around the fish. The constriction took place amid a flurry of movement and splashing under water and lasted a few minutes.

When the barbel ceased struggling, the snake released its hold and, taking its victim by the tail, commenced to swallow it. This was a normal procedure until the two fins behind the gills were reached, these of course were standing out at 90° and at a width of about $1\frac{3}{4}$ inches.

Now began a display of head and neck contortions, which lasted a full twenty minutes. The fish's head was eventually worked to the one side and the right-hand fin forced past the greatly extended mouth. The other fin did not give as much trouble. I watched the barbel going down with the spiny fins still standing straight out, distending the snake's body all the way. This no doubt was uncomfortable, for the fins did not break, although they did bend a little.

I now witnessed an unusual happening. The snake started to disgorge the barbel slowly until the fins were lying alongside the fish's body, when this happened the disgorging stopped. The snake's body was now distended to the size of the barbel and no further movements were discernable. The Water Snake took a fingerling bream an hour later, but refused further bream which were offered.

This snake has subsequently taken barbel head first. It also feeds readily on bream (Tilapia) and frogs (Rana angolensis). This large female was one of the first Mlanje Water-Snakes to be captured at Old Umtali and it has now been in captivity for well over a year.

* EDITOR'S NOTE. Lycodonomorphus mlanjensis can no longer be regarded as a race of L. rufulus, for the two species occur together in the irrigation furrows at Old Umtali. They may be distinguished as follows:

Midbody scale rows 21; pupil round; adults over 700 mm. in total length; dark olive to black above; subcaudals yellow with a dark median stripe.....L. mlanjensis Loveridge

Midbody scale rows 19; pupil subcircular to vertically sub-elliptic; adults rarely exceed 600 mm. in total length; olive brown above; subcaudals uniform light brown.....L. rufulus (Lichtenstein)

Psammophylax tritaeniatus tritaeniatus

A 12" Three-lined Grass-Snake from Umtali is feeding entirely on fish (minnows and a 1½" barbel). The fish are not taken in the water. They are placed in the water dish, but jump out and die on the gravel. The snake, which shares a cage with a young Caiman (C. sclerops), eats the dead fish even after they have dried out.

Psammophylax tritaeniatus variabilis

An adult snake collected on Zomba Plateau, Nyasaland, by Broadley and Balarin on 14th December. It was deposited in the Umtali Snake Park on 2nd January.

In 2½ months it has sloughed three times and consumed the following food items: 3 hatchling House Snakes (Boaedon f. fuliginosus); 1 Zambezi Blind-Snake (Typhlops s. mucruso); 1 Dwarf Gecko (Lygodactylus capensis) and one halfgrown skink(Mabuya striata).

EDITOR'S NOTE: Desmond Vesey-FitzGerald records (in litt.) that a specimen of this race which he collected in Tanganyika was eating a fish when taken.

Elapsoidea sundevallii decosteri

This Garter Snake arrived at Umtali Snake Park on 12th November last. In four months of captivity it has devoured 5 hatchling House Snakes; a young Olive Marsh-Snake (Natriciteres o. olivacea) and a young Zambezi Blind-Snake. It has ignored lizards and earthworms which were offered.

EDITOR'S NOTE: This Beitbridge snake has the low ventral count of decosteri, but resembles the Kalahari race fitzsimonsi in colouration. The black dorsum is divided from the white ventrum by a pale pink band, which is more distinct on the tail.

Elapsoidea seems to be primarily a snake-eater, although small skinks were taken by captive specimens at Salisbury Snake Park.

SOME AFRICAN FOLK-LORE REGARDING SNAKES. By A.C.Newman.

The Spitting Cobra (Naja nigricollis mossambica) will eat mealie meal and is very partial to Mafunde (Kaffir Corn) which has been spread out on a rock to dry. The snake is supposed to crawl onto the meal and start licking it up, after a time a clean patch is seen where it has eaten, but no spittle.

My explanation is that while crawling across the meal it has been startled by the appearance of the observer, and in its quick movement to the defensive poise, has cleared a patch on the rock.

The Nyasas, as well as our local Manicas, state emphatically that all cobras will eat mealie meal, or any meal, provided that it has been pounded in the traditional wooden pestle and mortar and not in a mechanical grinder.

Rats and mice, which can be found in almost any store room or granary, may be caught and eaten by cobras. Any meal adhering to the rodent is either brushed off or deposited in the snake's mouth,

giving the appearance of having eaten the mealie meal.

Puff Adders eat mushrooms of all kinds, including the poisonous varieties. They prefer those that are going rotten and are infested with worms. These they break off in pieces and swallow. Others have been seen to lick the juice off the fungus. Puff Adders will also eat mealie meal.

A rotten mushroom infested with worms and covered with flies and other insects would attract toads, these in turn would attract snakes. Having watched Puff Adders swallowing large toads, the appearance of the toad's body protruding from the snake's mouth could easily be mistaken for a piece of mushroom. The mealie meal myth, I would suggest, is the same as the one for cobras.

On being bitten by a Mamba, the victim is put on a branch of any big and leafy tree. The more leaves on the tree the better (there is a reason for this). Someone must now rush off and find a Nganga (Witchdoctor), who can cure snake bite. Until the arrival of the Nganga, the patient can be fed and given water if he desires it, but under no circumstances is he to touch the ground, if he does he will die at once.

The Mamba apparently hangs about and, as soon as its victim is put into the tree, it starts to count the leaves. This can take up to two days. If the Nganga arrives and gives the patient the 'muti' (Medicine) before the snake has counted all the leaves on the tree, he will live, but if the Mamba manages to complete his count first, the unfortunate fellow dies. There is no question of a recount!

This belief is very convenient for the Nganga, as who but the snake can say when the count of leaves was completed? After taking the 'muti' the patient will vomit violently, if the colour is dark the snake was a Black Mamba, if green, naturally, a Green Mamba. The locals do know that there are the two species. Within three days the patient is back to normal.

A Python found in the act of swallowing a duiker is watched until it has finished its meal. A stick of any kind and size, green or dry, is then taken and rubbed gently across the snake's back. This should have the effect of making the snake disgorge its meal. Having done this, the Python presumably slithers away, leaving you with a valuable stick, and also some venison!

The stick is kept until one of the women at the kraal is having a difficult and prolonged labour. The magic wand is now rubbed gently across the mother-to-be's stomach, this will end her pains, and the baby will be born within half an hour. The stick is put away until needed again and its magical qualities last indefinately.

You must use the same end of the stick for rubbing the mother as was used on the Python. You can lend it to anyone and it will work, but only for the use stated. It will not cure constipation or any other stomach ailments.

TWO FIELD TRIPS TO THE LOWER SHIRE VALLEY OF NYASALAND.

By R.S.Blaylock

Towards the end of December, 1961, Roy Owen and I set up camp on the Shire River about ten miles upstream from Chiromo, on the edge of the Elephant Swamps. Here we captured 163 snakes, representing 14 species, in fourteen days.

We aroused the interest of the local African inhabitants by displaying several snakes in their villages. Small rewards were offered to anyone that found and showed us a snake. This proved quite lucrative to them and beneficial to us. Very soon we had them well organised into two search parties. One was headed by Roy and the other by myself. In this way large areas of suitable country were covered in a comparatively short time.

Our bag consisted of 97 Western Green-Snakes (Philothamnus i. irregularis); 31 Olive Grass Snakes (Psammophis sibilans); 10 Bush-Snakes (Philothamnus s. semivariegatus); 4 Stripe-bellied Sand-Snakes (Psammophis s. sudanensis); 4 House Snakes (Boaedon f. fuliginosus); 3 Semiornate Snakes (Meizodon s. semiornata); 1 Spitting Cobra (Naja n. mossambica); 1 Olive Marsh-Snake (Natriciteres o. olivacea); 1 Zambezi Blind-Snake (Typhlops s. mucruso) and 1 Egg-eater (Dasypeltis s. scabra).

The area in which we operated consisted of a strip of fairly open flat ground, about one mile wide, lying between the swamps and a parallel range of well-wooded hills. Scattered low shrubs grow near the edge of the swamps, while larger trees (mainly Acacia spp.) grow towards the hills. The low shrubs yielded 85% of our catch (both species of Philothamnus, both Psammophis and Dasypeltis). The remaining snakes were caught in short grass between the shrubs (Meizodon, Boaedon; Naja; Natriciteres and Typhlops). Here were many small frogs, mainly Rana spp. Well disguised Hyperolius marmoratus and a few rats inhabited the shrubs. This abundance of frogs accounts for the high proportion of frog-eating snakes found. The Psammophis s. sudanensis were encountered in reeds on the side of a small stream running from the hills to the swamps. Here lizards (Mabuya striata and M.v.varia) basked on the leaves of the reeds. Chamaeleo dilepis was also present.

On the 15th January 1962 we set off for Fort Maguire on the south-eastern shore of Lake Nyasa. Here we hoped to find the Green Mamba (Dendroaspis angusticeps), as Roy had seen the species in this area on a previous trip. However, due to swollen rivers, we did not get that far. The Land Rover got bogged down in the mud five times! We eventually spent one day catching, 20 miles up from the southern end of the lake. This yielded 3 Philothamnus s. semivariegatus; 2 Thelotornis kirtlandii; 2 Rhamphiophis o. rostratus (dug out of the same hole); 1 Psammophis sibilans and 1 Bitis a. arietans. Apart from the Rufous Beaked-Snakes and the Puff Adder, these snakes were all caught in trees and bushes. A Green Mamba was seen, but it evaded capture.

The highlight of this trip was the capture of the three Meizodon s. semiornata, which had not been recorded from Nyasaland for more than 60 years (from Lake Nyasa). The large bag of snakes was, in all probability, a consequence of the hot sunny days, with occasional thunderstorms, that persisted for the entire trip.

In July 1962 we visited the same area and spent a day hunting for Meizodon to no avail. Not a sign of a snake was seen. The once frog infested grass held only insects. Xenopus were however encountered at the edge of the swamp.

The following day we moved to Tengani in the Port Herald District. During the morning of 14th July we collected specimens of Philothamnus s. semivariegatus; Psammophis s. sudanensis and Bitis a. arietans. An Egyptian Cobra (Naja h. haje) was seen near an anthill in the afternoon.

In brilliant sunshine the next day a Swamp Viper (Vipera superciliaris) was caught in a shallow swamp of the Shire River. It tried to escape notice by lying coiled around an aquatic water plant on the surface. A light green Rhombic Night Adder (Causus rhombeatus) was caught near Blantyre on the return journey.

The Shire Valley in all probability harbours a few more rare herpetozoans. A field trip to this area at the right time of the year cannot fail to be rewarding.

AN EXPEDITION TO THE MOZAMBIQUE PLAIN - NOVEMBER 1962.

By D.G.Broadley

In the last journal I stressed the need for material from the Mozambique plain, a very important region from the zoogeographical aspect. The distribution maps in FitzSimons' new 'Snakes of Southern Africa' emphasise the lack of records from this area. Between field trips to the Chimanimani Mountains and Nyasaland it was just possible to squeeze in a week on the Mozambique plain, with a representative collection of amphibians the main objective.

I was accompanied on this trip by David and Gillian Blake and we left Umtali on 24th November. Although permission to collect in the Vila Manica area had been obtained from the local Comandante, the Portuguese Customs authorities would still not allow me to take my .22/.410 shotgun through, so we were unfortunately reduced to collecting by hand.

A few hundred yards beyond the Machipanda border post a small snake crossed the road in front of the van, but we were unable to find it. We stopped just before Vila de Manica and examined some water-filled gravel pits. Some very athletic Rana oxyrhynchus played 'hard to get', but we got three of them and also two species of Phrynobatrachus.

Just beyond Vila de Manica we turned south towards Chikamba Dam. Dave had seen some small Platysaurus on granite outcrops two years ago, but was only able to get a badly mangled subadult out of a

crevice. I could only discern that it was not Platysaurus g. rhodesianus, which I have subsequently collected just north of Vila de Manica and in the Burma Valley due west of Chikamba, so we were anxious to get a series of these Flat-Lizards.

Just before reaching the kopjes, we stopped to examine a swamp. Four species of frogs were collected, the commonest being Phrynobatrachus acridoides, which has not yet been taken in Southern Rhodesia, although we were within ten miles of the border at this point. After a couple of halts to catch specimens of Agama hispida armata which crossed the road, we reached the Platysaurus habitat. Most of the Flat-Lizards were within easy reach of deep fissures, against which we were powerless. However, by using a crowbar on thin flakes and chasing bewildered lizards from cover to cover - thus tiring them out, we got a fair series. The status of these small Platysaurus is not yet clear, but they are more closely related to P. wilhelmi of the S.E. Transvaal and Zululand than to any of the Rhodesian forms. A pair of Agama kirkii fitzsimonsi were also collected on the granite, but the Mabuya quinquetaeniata were to quick for us. Riopa sundevallii and Ablepharus wahlbergii were taken under rocks lying in leaf mould.

We returned to the van, exhausted by the heat. It was cool r under the big trees (Brachystegia) and we decided to turn over a few more rocks. The first one revealed a Chirindia and feverish searching yielded two more. These amphisbaenids are invaluable, for the great variation in their head shields bridges the gap between C. swynnertoni of Mount Silinda and C. bushbyi of the Amatongas, both known only from single specimens. A nice adult Arthroleptis stenodactylus and a series of Bufo v. fenoulheti completed our haul. The latter were breeding on the wet granite rock faces and up to half a dozen were often found under a small flake.

We camped for the night on a backwater of Chikamba Dam. The place was strangely devoid of life - all we collected was a few Rana abyssinica and a Gerrhosaurus flavigularis which was under a derelict bark canoe. It rained during the night.

The next morning we collected a few more Platysaurus on our way back to the main road. We checked over another granite outcrop near Bandula and got three more of the same form. After that we had an uneventful run through to Beira, the only DOR picked up being a highly odiferous Causus defilippi. We stopped for lunch in the Amatongas Forest, but the rains had not yet broken here and it was very dry and lifeless. We settled into a chalet at the Estoril Holiday Camp, Macuti, just north of Beira. The camp is almost empty at this time of year and it made an excellent base camp.

The next day was spent exploring the swamps behind the camp. Beira had not yet had any rain, so the swamps were dry, but fortunately for us a series of deep holes had been dug for the reception of concrete telegraph poles - forming perfect frog traps.

Two sand-filled holes contained several Bufo regularis and a Hylambates maculatus. The rest were in clay and were full of water. In these the commonest frog was Rana galamensis bravana, a large aquatic species with a golden back and da ker flanks. Phrynobatrachus acridoides was very common, as it is all over the Mozambique plain, we got a few Xenopus muelleri.

The walls of the camp chalets at Macuti swarmed with geckos. During the day Lygodactylus capensis were active, these were uniform white in colour, but if disturbed while foraging in the grass they were an attractive light green when they scuttled up the wall. I have often found blackish geckos in burnt out hollow trees, but I have never seen a green gecko before! A few Mabuya homalocephala depressa and Ichnotrophis squamulosa were also captured around the chalets. After dark another pallid gecko appeared on the walls, though it was not so common as Lygodactylus. This was Hemidactylus mercatorius, the Palm Gecko, not previously known south of Tete (one recently received from Gorongoza Game Reserve). Numerous immature Hyperolius marmoratus taeniatus came out from under the eaves at night and sat on the walls or lamp posts.

On the 27th, we set out for Savane, a derelict farm on a mangrove fringed estuary 20 miles north of Beira. We soon got our first specimen, an Agama m. mossambica ♀, by running over it! At Savane we checked over roofless buildings and got a nice series of the large 'East African' form of Hemidactylus mabouia, these were twice the size of the M. mercatorius at Macuti. On the edge of the mangroves we missed a couple of Mabuya maculilabris in a grove of Cashew Trees, but there was little else of herpetological interest. We did flush one fair sized Varanus niloticus. We spent some time splashing around in the mangroves and caught some Periopthalmus ('Mud-skippers' or 'Tree-climbing Perch') and Fiddler Crabs.

On the way back we explored a patch of forest. Several Agama m. mossambica were seen on trees. The forest was very dry, but a depression yielded six species of frogs.

A little further on I stopped for a DOR, a much battered Lycodonomorphus whytii with 37 subcaudals. This poorly known water snake has not previously been recorded south of the Zambezi. The old course of the Zambezi is indicated by swamps extending from Sena to Beira, so it would not be surprising to find Vipera superciliaris here.

The rains broke that night, so we tried the local swamps again the next morning. The frogs were still not yet assembled in force but we got two interesting species of Rana (Ptychadena) and a Philothamnus i. irregularis. We visited Mrs. Trinidad's remarkable Zoo and got a good haul of tree-frogs in her garden, Hylambates maculatus, Afrixalus f. fornasinii and A. b. brachycnemis on bananas and Hyperolius m. taeniatus on pawpaws. A fine Mabuya maculilabris boulengeri was caught in the fern house, this being the first specimen to be collected south of Nyasaland. Mrs.

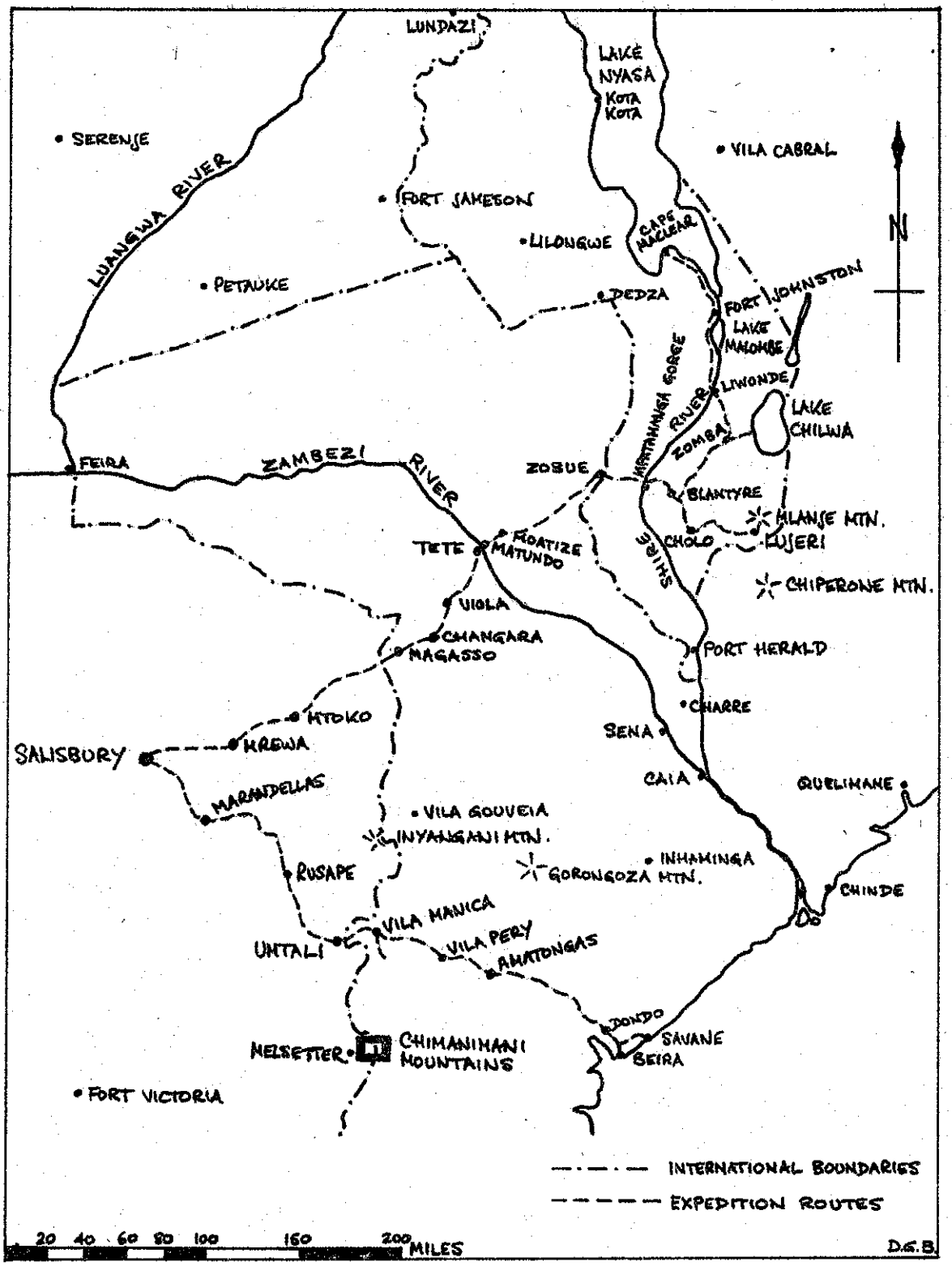
Trinidad gave us the only terrapin which she had on hand, this was a Pelusios subniger,as were two fragmentary specimens found in the swamps. I had expected to find P. castaneus on the Mozambique plain, for this species occurs in Inhaca Island. The DOR's found on the roads through the swamps were all to flattened to salvage, they included Naja h. haje, Philothamnus sp. and Causus sp.

I worked over the thickets at the edge of the beach that afternoon, there is no primary forest left here, but the huge stumps lying around in the swamps indicate that this must once have been a suitable habitat for Naja melanoleuca and Bitis gabonica. The only interesting specimen taken was a 'giant' Riopa sundevallii. That evening we worked over the same area, collecting a few Hyperolius c. concolor (mossambicus phase) and a Chamaeleo dilepis. A more interesting capture was a sleeping Philothamnus,which at first I took for a semivariegatus X irregularis hybrid, for it had faint indications of semivariegatus-like dorsal cross-bars, while in other respects it was intermediate. It is in fact the most northerly P. natalensis so far collected. One of the best identification features in this species is the presence of feeble keels on the posterior dorsal scales. The next morning I collected a Philothamnus s. semivariegatus twisted round a concrete lamp standard in camp!

We started out for home at 10 a.m. and made our first stop a few miles beyond Dondo. Four species of frogs were collected among the dead leaves of the riverine forest floor. The only reptile seen was a Mabuya maculilabris basking on a fallen tree spanning a stream, but it evaded capture. A Varanus n. niloticus was picked up DOR near Ponte do Pungue and we stopped again near Vila Machado, where a large assembly of Bufo carens and Ptychadena were calling from a shallow swamp. While Dave and myself were collecting a series of the Ptychadenas, Gillian excelled herself by catching the second known specimen of Bufo taitanus beiranus by the roadside!

We stopped for the night in the Amatongas Forest and after dark Dave and myself paid a visit to the local frogs, who were calling from the drains of the new road (still under construction here) and a shallow vlei beside the road. The chorus was so loud that we could not hear one another speak at a range of two feet! The grass tufts in the vlei swarmed with Afrixalus b. brachycnemis; Hyperolius c. concolor and H. m. taeniatus, a few scattered Pyxicephalus ornatus were calling, but only one was captured. The roadside drains yielded good series of Rana oxyrhynchus and Kassina senegalensis, a few Phrynobatrachus b. bifasciatus and Phrynobatrachus acridoides were also taken. Two species of Arthroleptis were calling in the forest, but we could only find a single specimen of A. stenodactylus.

We spent a couple of hours in the forest next morning, but the only reptile seen was an Agama m. mossambica and the frogs collected were common forms.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LAKE MALOMBE
LIWONDE
LAKE CHILWA
SHIRE RIVER
ZOMBA
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ZAMBEZI RIVER
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BLANTYRE
MLANJE MTN.
CHOLO
LUJERI
TETE
MATUNDO
MOATIZE
SHIRE
CHIPERONE MTN.
VIOLA
CHANGARA
NAGASSO
PORT HERALD
CHARRE
HTOKO
SENA
SALISBURY
KREWA
CAIA
QUELIMANE
MARANDELLAS
VILA GOUVEIA
INYANGANI MTN.
INHAMINGA
RUSAPE
GORONGOZA MTN.
CHINDE
VILA MANICA
UMTALI
VILA PERY
AMATONGAS
DONDO
SAVANE
BEIRA
NELSETTER
CHIMANIMANI MOUNTAINS
FORT VICTORIA
INTERNATIONAL BOUNDARIES
EXPEDITION ROUTES
20 40 60 80 100 160 200 MILES
D.G.B.

The next stop was just after Vila Pery, where an isolated sheer-sided peak two miles from the road looked interesting. The rock swarmed with Platysaurus, a larger form than those collected earlier on the trip, but we were unable to catch any. The lack of a firearm was severely felt here! Two snakes found DOR completed our collection - a Black Mamba near Bandula and a young Cape File Snake just after Forbes Border Post.

AN EXPEDITION TO TETE AND SOUTH NYASALAND. By D.G.Broadley

My companion on this expedition was Luchi Balarin and we left Salisbury on the 8th of December. The first snake collected was a Calamelaps u. miolepis DOR just before Mtoko. Seven miles beyond Mtoko we stopped and worked over some paragneiss kopjes, collecting a good series of Pachydactylus c. affinis in addition to the usual local rupicolous lizards - Afroedura transvaalica, Homopholis wahlbergii, Agama k. kirkii, Mabuya l. rhodesiana, Platysaurus g. subniger and P. imperator.

We passed through Rhodesian Customs and stopped for the night ten miles inside Mozambique. The local rock outcrops did not produce any surprises, but a satisfactory representative collection was made, comprising Hemidactylus mabouia; Afroedura transvaalica; Pachydactylus c. affinis, P. p. punctatus, P. tetensis, Agama k. kirkii, Mabuya q. margaritifer, M. l. rhodesiana, Gerrhosaurus v. validus, Platysaurus imperator and P. torquatus (P. g. subniger drops out soon after Mtoko). Several Chiromantis xerampelina were found sitting on a Baobab, while a couple of Phrynomerus b. bifasc- were hiding under loose bark at the base of the same tree. Some Afrixalus b. brachycnemis were found between the leaves and stem of bananas. The new road was open to traffic here and water-filled roadside gravel pits yielded a good haul of amphibians after dark.

Next morning we passed through Portuguese Customs at Changara and pushed on to the Mazoe River at Viola. There were few frogs to be found, but the local rocks yielded a very good series of geckos - Hemidactylus mabouia, Afroedura transvaalica subsp. nov., Pachydactylus p. punctatus, P. bibronii and P. tetensis. A number of Afroedura and P. tetensis were collected at night, when they leave the safety of their crevices to forage. The only other lizards collected here were skinks - Mabuya q. margaritifer, M. v. varia, M. l. rhodesiana, Riopa sundevallii and Ablepharus wahlbergii. Several snakes were missed along the river, but two Psammophis s. subtaeniatus and an Aparallactus capensis punctatolineatus were collected.

Fifteen miles beyond Viola the road runs along the Luenha River and we had a quick look at it. Mabuya striata ('ellenbergeri' phase) were common on trees, but the only other reptiles collected were Lygodactylus capensis and Gerrhosaurus flavigularis.

We had not seen any rock outcrops since Changara, but 15 miles before Tete we ran into 'Platysaurus country' again. We made a representative collection of the local rupicolous forms -

Afroedura transvaalica subsp. nov., Pachydactylus tetensis, Agama k. kirkii, Mabuya q. margaritifer, Mabuya l. rhodesiana, Gerrhosaurus v. validus and Platysaurus torquatus. Here I was surprised to find dozens of Pachydactylus tetensis living in deep crevices of a Baobab growing on a rock outcrop, all previous specimens had been taken in rock crevices. A pair of Lygodactylus picturatus chobiensis were shot on a Baobab.

We arrived at Tete in torrential rain and camped for the night on the banks of the Zambezi five miles upstream from Tete. The next morning was damp and overcast, so we left our artillery behind and resigned ourselves to rock turning and fissure forcing at Mwanza Rocks, type locality of Pachydactylus tetensis. We collected seven topotypes of this common gecko and 18 of the equally abundant Afroedura transvaalica subsp. nov. Pachydactylus p. punctatus was less common. Later in the morning the sun broke through and tempted a few Platysaurus out of their crevices. The only snake seen was a spotted juvenile Boaedon which Luchi found in a crevice.

After crossing the Tete pontoon we pushed on a few miles to the Revubue River and stopped for lunch. There was a deep backwater beside the road and I watched a large Cycloderma swim across the pool. A Gerrhosaurus major grandis dived down a hole in front of me, but she fell into an ambush five minutes later.

The next stop was at Moatize, where the road passes the entrance to a derelict coal mine. The coal seam is exposed as a cliff face and is capped with sandstone, on which a series of Mabuya q. margaritifer were collected. Four of the 'giant' form of Hemidactylus mabouia were caught inside rooms at the mine entrance. At the entrance to one shaft the floor was covered with dead bats, probably killed by methane poisoning. The two species represented were both bright orange in colour, one of them proved to be new for southern Africa. Some small kopjes 25 miles beyond Tete yielded some more of the new race of Afroedura transvaalica, bringing the type series up to 40. This was also the first time that the genus had been collected north of the Zambezi.

We camped for the night 45 miles beyond Tete. The commonest local frog was Chiromantis xerampelina, which builds communal nests here - up to half a dozen nests in a clump - as there are not enough good nest-building sites to go round! While working my way round a roadside pool after dark I heard a splash and found that a young bullfrog (Pyxicephalus adspersus) had jumped up to snatch a Chiromantis off a branch. Both ended up as Museum specimens!

Early the next morning we hit a stretch of road which had been churned up into a sea of mud by heavy trucks. I stopped and got out to investigate and nearly stepped on a hatchling terrapin (Pelusios sinuatus) in a pool of mud in the middle of the main Salisbury - Blantyre road!

We reached the Nyasaland border at the southern end of the Kirk Range and climbed a small kopje which the border bisected. There

was no sign of Afroedura, although specimens of Hemidactylus mabouia and Pachydactylus tetensis were collected. I climbed on to a rock commanding a good area and shot a ♂ Agama k. kirkii which was 'head-bobbing' below me. The agama leaped off the rock and vanished. I peered down to try and locate it, then noticed a curious circular movement in the bush immediately below me. A moment later the head of a large Dendroaspis p. polylepis, with 'hood' spread, reared up through the foliage. As the mamba was within a few feet of cover, I dismissed any thoughts of attempting to catch it and fired a round of .22 dust shot into its heart and lungs at a range of five feet. I thought that a round of .410 dust shot from the other barrel would be required to finish the snake off, but it was 'hors de combat' and Luchi bagged it while I covered it with the shotgun. The 8 foot mamba died shortly afterwards, but I do not recommend .22 dust on a snake of this size except at very close quarters, .410 shot is much safer!

We passed through Portuguese Customs at Zobue and then climbed Cadole Peak, again actually on the P.E.A. - Nyasaland border. Here I collected my first Platysaurus g. nyasae, very similar in size and colouration to P. g. rhodesianus. Here we collected Mabuya q. obsti for the first time on the trip. After passing through Nyasaland Customs at Mwanza we stopped for Luchi to catch a female Boomslang which he had spotted climbing a tree by the roadside. We pulled in for the night at Mpatamanga Gorge on the Shire River. There was little amphibian life in evidence after dark, but Luchi did find an Atractaspis bibronii on the approach to the bridge. The Nyasaland race should theoretically be rostrata, but this one had 21 scale rows.

The next morning we climbed up Mpatamanga Peak, the main objective being a series of topotypic Platysaurus g. nyasae. These were not plentiful except at the summit and it took five hours to collect a series of 22. Two geckos were added to the Nyasaland list, Pachydactylus p. punctatus and P. tetensis, the latter being very common. Specimens of Mabuya q. obsti and M.l.rhodesiana were also collected. Luchi bagged the only snake, a Telescopus s. semiannulatus which was coiled up under a large flake. We hurried on to Blantyre after lunch, but were delayed by a blow-out. We reached Zomba that evening and were made welcome by Charles Sweeney and his wife.

The next day was spent on Zomba Plateau, but we were disappointed to find so much of it covered in coniferous plantations. We picked up two Duberria lutrix shirana DOR and then Luchi spotted a Psammophylax tritaeniatus variabilis crossing the road, which he eventually caught after we had searched the area for 20 minutes. I wanted a series of topotypic Lygodactylus angularis, but had to be satisfied with a fine ♂ caught on a boulder. Specimens of Mabuya v. varia and M. q. obsti (not previously recorded from the Plateau) were also taken on boulders.

On the morning of 15th we set out for Lake Nyasa, making a few stops en route, but found the rift valley very dry and lifeless.

That night we camped on the lake shore at Cape Maclear, type locality for Pachydactylus oshaughnessyi.

This dry area, with its paragneiss kopjes, reminded me very much of Kapami in the Wankie District of Southern Rhodesia, where I have collected several P. oshaughnessyi. We spent several hours on the kopjes, but got nothing of interest, only Hemidactylus mabouia, Agama k. kirkii, Mabuya q. obsti, M. v. varia and M. l. rhodesiana. On the way back to the van I shot and wounded a fine Nucras intertexta ornata, which I then had to dig out of its hole at the base of a bush. This lizard was indistinguishable from specimens collected at low altitudes in Southern Rhodesia.

Our next stop was at the Ministry of Agriculture Experimental Coconut Plantation near Fort Johnston. On the outward journey we had stopped here and I nearly tripped over a fine Rufous Beaked-Snake which promptly dived down a hole and had to be dug out. On the way home it swallowed a 2 foot House Snake which shared its box and it is now thriving at Umtali on a diet of rats.

We obtained permission to turn over some of the heaps of palm fronds and right at the bottom of the first pile was a fine adult Pachydactylus oshaughnessyi! This is only the sixth to be taken in Nyasaland. This spurred us to greater efforts, but the only other reptiles found were several Mabuya striata and Gerrhosaurus flavigularis, plus the Boaedon which the Rhamphiophis later ate. There were plenty of aestivating frogs under the rotting fronds, mainly Phrynobatrachus acridoides and P. u. mababiensis, with an odd Hyperolius c. concolor and Kassina senegalensis.

We pulled up for the night on the shores of Lake Malombe and waded out into the swamps after dark. Luchi was overweight and soon retired after getting bogged in the soft mud. There were a few frogs calling, but all from reeds in deep water, so after being eaten alive by mosquitoes for a while I too retired to dry land. Two hatchling Pelusios sinuatus were brought in by piccanins the next morning, but the local fishermen did not produce any Cyclo-derma.

Our journey back to Zomba was uneventful, apart from a nice Gerrhosaurus n. nigrolineatus that we hit near Liwonde. After lunch we travelled on to Mchenga, a fishing village on Lake Chilwa. The swamps were very dry, but we collected some interesting frogs, mainly aestivating under a derelict dugout canoe. Another upturned canoe sheltered a Naja nigricollis mossambica. On the return journey I noticed some movement in the roadside drains. Investigation revealed that this was caused by platannas and after a number of futile sweeps through the mud a Xenopus muelleri was caught.

The next morning we bade farewell to the Sweeneys and headed for Mlanje Mountain. The only DOR's seen were a Chamaeleo dilepis near Zomba and a Chamaeleo melleri at Cholo. We did not reach the Lujeri Estate until after dark and we had considerable difficulty in finding Colin Findlay's house, which was Loveridge's base when he

collected in the Ruo Gorge in 1949. Colin was out when we arrived, but he finally pitched up after midnight and we did not get to bed again that night!

The first objective was a series of Platysaurus mitchelli, so we started our search at the Lujeri power house, where Loveridge had collected many of his type series. There were no lizards to be seen, so we followed the path through the Ruo Gorge forest, where the rest of the type series had been taken. The only reptiles seen were Dwarf Geckos on trees, a few of which were collected on the assumption that they were Lygodactylus angularis.

I decided to scale the almost sheer granite walls of the Ruo Gorge to see what lived in a sunnier situation. The ascent was only made possible by clumps of grass growing on the rock, these provided hand and foot holds, but as the grass tufts also supported spiny succulents the hand holds had to be used circumspectly. As I approached the first rock fissures there were two large Platysaurus watching me. I shot them both, but as they were twice the size of the types of P. mitchelli I was not sure whether this was the same species. A tricky climb over bare rock, using small finger and toe holes, brought me to the base of a deep fissure running up the mountainside. This crack provided shelter for dozens of Platysaurus which were basking on the steep face above me. The big males were brilliantly coloured, and their display behaviour differed markedly from that of other species of the genus. Other male Platysaurus display the brilliant colouring of throat and chest by turning to face an intruder and raising the body on straightened forelimbs. This Mlanje species turns broadside on to an intruder and inflates the throat and body to display their rainbow hues. The throat is bright cerise, the flanks pale blue with pink spots, the chest is transversely banded in black, prussian blue and brick red, the tail and back are bright green. The males look enormous when in full display.

The lizards were quite undisturbed by my presence and were slow to retreat even when I opened fire. When a lizard was shot a crowd of others would converge upon the twitching corpse: the back of one big male was ripped open by a ricochetting pellet and a mob of lizards tore at his entrails. I gradually worked my way up the slope. The lizards were easy to shoot, but it was not so easy to recover some of the bodies which fell onto almost inaccessible ledges. Several corpses bounced and rolled 50 or 60 feet to the base of the fissure. The Ruo Gorge is a sun trap and towards noon it became terribly hot on the bare rock face and the Platysaurus withdrew into the shade. I recovered 15 specimens and descended into the forest.

Back at the house, I compared my lizards with Loveridge's description of P. mitchelli and found that they agreed perfectly in scalation except that the transverse ventral count in the adults is 12-14 (invariably 12 in the juvenile type series). The difference in size is remarkable, the largest of Loveridge's 19 lizards measured only 52 mm. from snout to vent, while my smallest measures

68 mm., the largest ♂ 112 mm. and the largest ♀ 82 mm. Apparently the newly hatched young do not join their parents on the walls of the gorge, where they might well get eaten by adult Flat-Lizards, but descend to the bottom of the gorge and stay there until they are big enough to hold their own - probably after about 9 months. Loveridge collected his type series on March 31st, when they would be about three months old. I collected my series on December 19th, before the eggs would be due to hatch, which accounts for the absence of young Platysaurus around the power house. UM.4268 N.mlanjensis Holotype

Early the next morning, accompanied by two of Colin Findlay's trackers, we made our first ascent of Mlanje Mountain. On the way up we collected 3 Brookesia platyceps and a Chamaeleo goetzei nyikae, the latter only previously known from the Nyika Plateau, nearly 400 miles to the north of Mlanje. We also got a long series of topotypic Arthroleptis adolfifriederici francei, which were very common among the dead leaves of the forest floor. The colouration varied from pale grey, through shades of yellow, orange, brown and brick red to almost black.

The grasslands of the Ruo Basin seem to support little reptile life. Mabuya v. varia is common along the paths and fire-breaks, while 'montane' Mabuya striata are common on boulders. The taxonomic position of the latter skinks requires clarification. Loveridge described them as new, under the name Mabuya bocagii mlanjensis, but fails to give any characters which distinguish them from striata apart from a dark vertebral stripe, which is frequently absent. The montane skinks are certainly much smaller and darker than lowland forms of striata, but this phenotype is found all the way along the eastern escarpment from Inyanga to the Natal Drakensberg and both FitzSimons and myself have up to now treated it simply as a phase of M. striata. Only a full scale revision of the whole striata species group can settle this problem. = T. mlanjensis

Pools in the rocks beside the fast-flowing mountain streams contained numerous small flattened frogs (Rana sp. nov.), reminiscent of Rana vertebralis of the Natal Drakensberg. This species does not occur in the Ruo Gorge, where it is replaced by the cosmopolitan Rana angolensis. R. johnstoni

The next day began well, when I shot a nice Mabuya maculilabris comorensis from the veranda of the house as it basked on a nearby tree. Log piles and stumps at the edge of new tea plantations yielded good series of Agama m. mossambica and 'typical' Mabuya striata. The following day was more profitable. A Scelotes t. tetradactylus was brought in by an African before lunch, while I collected two species of Arthroleptis in a freshly cleared area which looked promising: in the meantime Luchi had at last located an Holaspis g. laevis near the house. After lunch we returned to the spot and collected two specimens. We carried on to my cleared area and found that the few remaining big trees swarmed with Holaspis, up to eight specimens on a single tree! These arboreal lacertids circle round and round the tree in their hunt for insects and they seem to spend

less time basking than other lizards. They are not difficult to spot, due to their black and cream dorsal stripes and Cambridge blue tails, but they are difficult to kill because they make such small targets. Mabuya m. comorensis were also quite plentiful, usually basking on tree trunks or foraging in the debris left by the clearing operations. Mabuya striata was common in similar situations, but was most plentiful on the uprooted stumps of the big forest trees.

That evening I visited a small dam with swampy margins to see what frogs were in residence. The commonest species were Hyperolius m. albofasciatus, H. c. concolor and Afrixalus b. brachycnemis, but H. nasutus and A. f. fornasinii were also present. A few Rana oxyrhynchus were taken in shallow pools on the road.

On the morning of the 23rd I visited on area of riverine forest which is notorious for its Naja melanoleuca, unfortunately they kept out of my way! The largest specimen collected by Colin Findlay on the Lujeri Estate was a female measuring 8 feet 3 inches! I saw Xenopus l. laevis and Rana abyssinica along the river, but had to return after dark in order to catch any. After lunch Luchi and I mopped up a few specimens around the house. We found a couple of Mabuya m. comorensis living in the varanda ceiling, as well as a pair of Lygodactylus. Another Dwarf Gecko was found on a tree in the garden, as it ascended the tree it was spotted and chased by an Holaspis!

Up to now we had taken these geckos to be L. angularis, for they had the throat markings typical of that species. We had remarked on the large size of the geckos shot in the Ruo Gorge forest, but one of the males shot at the house was enormous and a closer examination revealed that we had a new species on our hands! The largest ♂ measured 50 mm. from snout to vent, making it the largest species in the genus. The new species is most closely related to the montane L. bernardi. = L. regs

The first ascent of Mlanje had put Luchi out of action with knee trouble, so I made a second ascent on my own. My goal was the bare granite peaks at the summit, which had been shrouded with cloud on the day of the first ascent. The four hour climb from the power house (2,700 ft.) to the Ruo Basin (6,000 ft.) was uneventful, although I got another Brookesia among leaves on the path. The bare slopes of Dzole peak seemed to harbour little in the way of reptile life. Some amphibian was calling and there were small black tadpoles in the shallow pools on the rock face, suggesting a rupicolous species of Bufo, but I was unable to find any. Towards the top I found a few 'montane' Mabuya striata, but it was not until I scrambled up onto the summit of Dzole (8,915 ft.) that anything of interest was found. There were quite a few loose slabs of rock on the summit. Many of these sheltered Dwarf Geckos - Lygodactylus bernardi subsp. nov. The typical form is only known from Inyangani Mountain in Southern Rhodesia. Under the same stones were some extraordinary frogs with unwebbed feet, apparently a new genus.

L bonsi

Nothophryne broadleyi gen & sp. nov.

Pseudotes mlanjensis

With time running out fast, I hurriedly turned over rock after rock, gradually building up respectable series of both gecko and frog. Just before starting my descent, I dislodged a boulder lying on a steep rock face and was just in time to grab an elongate skink before it followed the rock over the precipice. This was the second known specimen of an undescribed northern race of Scelotes arnoldi, the common montane grassland skink of the southeastern Rhodesian highlands. The Mlanje skink has much longer digets than the typical form and is also more colourful.

It was six o'clock before I reached the Mlanje Cedar forest at the top of the Ruo Gorge. I ran down the mountain until the light got too bad, reaching the last of the stream crossings (the torrent where F.H.France was killed in 1949) as darkness fell. I removed my boots and waded across the stream, but it was now too dark in the forest to distinguish the path, so I could go no further. I then found that I had left my haversack with a pullover and pac-a-mac in it on the other side of the stream, so I did not find the damp forest floor very comfortable. It was truly a case of 'a torch, a torch, my kingdom for a torch!

Colin and Luchi set out to look for me at 8 o'clock and reached me at 10 p.m. On the way back we found that the grass and shrubs along the path swarmed with sleeping Brookesia platyceps, which show up pale greenish-yellow in a torch beam. We collected twenty without exerting ourselves, then finally sat down to a dinner of wild pig at 1 a.m. on Christmas morning!

We filled in a few gaps in the collection during the next two days and bade farewell to Colin late on Boxing Day. Our next collecting station was Cholo, where we contacted Roger Royle, the local Principal Agricultural Officer. We spent the next day nd a half on Cholo Mountain, looking for caecilians without success. We collected a variety of frogs, although Xenopus l. laevis was by far the commonest species in the small dams on the mountain. The only reptile seen on this damp mountain was Mabuya v. varia, although Agama cyanogaster occurs in the tea plantations on the lower slopes.

On the afternoon of the 28th we carried on to Blantyre, where we met Peter Hannay, curator of the Nyasaland Museum. When we left Blantyre it was pouring with rain and we had a slippery journey after we left the tar mat at Chileka. Towards the Mpatamanga Gorge the rain stopped and we pulled up for a snake DOR, walking back we found a freshly killed Crotaphopeltis h. hotamboeia ♀, with a male of the same species courting her corpse. We collected a few frogs, then stopped for the night near Mwanza.

Early next morning we spent an hour collecting on nearby rocks, getting Hemidactylus mabouia, Pachydactylus tetensis, Agama k. kirkii, Gerrhosaurus v. validus and Platysaurus g. nyasae. After passing through both customs posts we stopped and watched a bulldozer clearing the new road line, but all he turned up was a solitary Phrynobatrachus! Walking back over the previous day's clearing we picked

up the mangled corpses of a Crotaphopeltis and a Naja n. mossambica. We stopped for the night under a Baobab beside the Revubue River, five miles from the Zambezi. I went down into the reedbeds after dark, but although there were Hyperolius calling they were all in thick reedbeds in deep water, so I returned to the van. About 10 o'clock a jeep drew up and two Portuguese soldiers in full battle order jumped out. They regarded us as suspicious characters - we were both by now heavily bearded and looked like rebels or gun-runners! However, the english-speaking lieutenant was quite satisfied when we produced our permits and passports.

Next morning we examined some sandstone outcrops at Matundo, on the north bank of the Zambezi immediately opposite Tete. We got a series of Platysaurus torquatus, which had not previously been recorded on this side of the river, also Pachydactylus tetensis and Mabuya q. margaritifer. A Leptotyphlops longicauda was found under a stone. Luchi just missed a Psammophis subtaeniatus which was devouring a Pyxicephalus adspersus at a roadside pool.

We crossed the Zambezi and headed for home. The Mazoe River was a foot over its bridge when we crossed it. At Changara we turned off to look at some outcrops near the Luenha River Bridge, where we again collected Platysaurus torquatus. We passed through Rhodesian Customs at Nyampanda at five minutes to six. Southern Rhodesia had been having heavy rain in our absence, so we had decided to push straight through to Salisbury that night. I stopped every ten miles to check which race of Hyperolius marmoratus occurred - the lowland race taeniatus extends almost to Mtoko. We were finally prevented from reaching Salisbury that night by a submerged low-level bridge 25 miles from town. By the next morning the river had subsided and we got into Salisbury on New Years Eve as originally planned. Meanwhile three rivers in Mtoko District had come up and cut the road to Tete, so we only just got through in time!

In 24 days in the field we had collected 750 herpetological specimens, including six new forms.

BOOK REVIEWS

'Snakes of Southern Africa' by Vivian F.M.FitzSimons.
Published by Purnell & Sons (S.A.) (Pty.) Ltd. Cape Town: Jo'burg.
Price: £7..10s. 423 pages, 76 colour plates, 43 black & white photographs, 106 text figures and 77 distribution maps.

Herpetologists have waited a long time for this book, but it has been well worth waiting for. Dr. FitzSimons magnum opus is the first really comprehensive work to be published covering the snakes of Southern Africa. The introductory chapters deal with the morphology and biology of snakes in general, together with sections on venoms and treatment of snake-bite (by D.C.FitzSimons), snake folklore, etc. The systematic account deals with 137 forms found south of the Cunene - Zambezi line. For each form a complete synonymy is given,

followed by a full description, an outline of the distribution, a full list of recorded localities and a section giving field notes. A most valuable feature is the distribution maps, which will be a boon to zoogeographers. The excellent text figures, by the author and Dr. C.K.Brain, show skulls for each family and head shield arrangements for most species.

The colour plates, from paintings by the late Rev. P.J.Smit, are very good, with a few exceptions (e.g. Amplorhinus multimaculatus and Psammophylax t. tritaeniatus). The black and white photographs, mainly by Dr. C.K.Brain, are excellent. It should be noted that there is a slip in the caption to Plate 20, which is a Psammophis crucifer, not a Psammophylax tritaeniatus.

The appendices include a gazetteer of place names, a most comprehensive bibliography and indices to scientific and vernacular names.

The book is attractively produced, printed on good quality paper and well bound, the overall size is 11 X 8½ inches.

It is unfortunate that lack of time resulted in inadequate proof reading, which has led to a crop of printers' errors. Most of these are minor and quite obvious, but it seems advisable to draw attention to the following:

Page 83. Wrong symbols given in key to Map 6. These should be a circle for L. occidentalis and a square for L. gracilior.

Page 137. Caption to Fig. 35. Specimen illustrated is UM.1782 from Kasane, Bechuanaland.

Page 188. Description of Crotaphopeltis h. hotamboeia. Anal is described as divided instead of entire.

Page 217. Map 42. Delete Bulawayo record for Rhamphiophis o. rostratus (see footnote to page 216).

Page 275. Map 59. Delete Umtali record for Aspidelaps scutatus.

To sum up, this book is a 'must' for every enthusiastic herpetologist who can scrape together £7..10s. D.G.B.

'The Reptiles and Amphibians of Southern Africa.' by Walter Rose. Published by Maskew Miller Ltd., Cape Town. Price £1..17..6. 494 pages, 294 text figures (photographs and line drawings).

This book unfortunately arrived just too late for review in the last H.A.R. Journal, so that by now most members probably have it! It really needs no introduction, for it is a greatly revised and expanded version of Walter Rose's earlier books on this subject. As it has been possible to use the blocks from previous editions this new book is priced extremely low, so that it should soon become established as the best comprehensive introduction to the herpetology of Southern Africa.

Dr. Rose is essentially a naturalist, and he treats his subjects in this book as living animals, an admirable approach for the beginner. It is a minor critisism that the nomenclature and keys, largely adapted from Boulenger's Catalogues (1893-6), are obselete. D.G.B.