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JOTTINGS FROM "COBRA CORNER"

Dear Member,

Since the first Journal was circulated we have entered a new year, may it be a prosperous one for the Association. Looking back over the year 1957, I am struck by the progress made in twelve short months; with the Association well established I am sure that 1958 will see even greater strides made.

Two species have been added to the S.Rhodesian List since I last wrote this column. The capture of the first specimen of Naja melanoleuca is recorded elsewhere; the other new species is Leptotyphlops longicauda. I collected 10 specimens of this flesh-pink Worm-Snake on a quartz reef near Balla Balla during December. It had not previously been recorded south of Tete, Peters' type locality.

The Journal for May will be out a few weeks early, as I shall be flying over to England for two months leave early in April. This issue will contain the Checklist of the Snakes of Southern Rhodesia, with lepidosis, record specimens and "common names". This will serve as a guide to future Journals when scientific names only will be used.

The first issue of the Journal was well received by both members and recipients of complimentary copies alike. I would like to have members' opinions on the following suggestions.

1. That the Journal should be cut down in size from foolscap to quarto.

2. That provision should be made for "Associate Members", who would pay 10/- a year to receive the Journal, but would have no say in the running of the Association. This is mainly to cater for herpetologists outside Rhodesia. In the case of Museums and other organisations, exchange of publications is preferred. Such an arrangement would help our funds, for we cannot have less than 50 copies run off, and there is no point in retaining large surplus stocks.

3. How many members would be interested in (a) A blazer badge. (b) A small lapel badge.

Articles in this issue are as follows:

Page 2. Mount Silinda Expedition, December, 1957.

Page 2. Distribution of the races of Thelotornis kirtlandii.

Page 3. Species of the genera Xenocalamus and Chilorhinophis occurring in Rhodesia.

Page 5. Occurrence of Dipsadoboa shrevei in Northern Rhodesia.

Page 5. The races of Naja nigricollis found in Rhodesia.

Page 6. The case history of Bitis atropos bite.

Good Hunting,

D.G.Broadley,

Hon.Secretary/Treasurer, H.A.R.

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

The first Association Expedition got off to a bad start when Billy Armitage dropped out through illness. Dave Blake and myself left Umtali on the 28th December and prospects looked bleak when we encountered rain in the Sabi Valley. However blue skies appeared soon after we passed the Birchenough Bridge turnoff, and we had three days of perfect weather.

We camped on the Umzilizwe River, at the foot of Mount Silinda, and concentrated on the stream itself, where I had seen the big Forest Cobra twelve months previously. We flushed plenty of snakes, mainly Philothamnus i. irregularis and Psammophis s. sibilans, but the only one captured was a fine 3'7" irregularis.

Two Crotaphopeltis h. hotamboeia were taken at night as they displayed arboreal ability to hunt sedge frogs (Hyperolius spp.). The only other snake captured along the river was a juvenile Naja nigricollis mossambica found under a log.

On the summit of Mount Silinda we searched the Chirinda Forest and the forest edges, but collected only amphibians. Then we tried the forested edges of some mealie lands. Dave was on the spot to see a Forest Cobra emerge from a hole and head for the forest a yard away. He grabbed it by the tail and flung it back into the lands, where we eventually captured it. The cobra was very lively and gave us a hectic few minutes! This Naja melanoleuca is 5'6½" in length. It is light grey-brown speckled with black above and bright yellow, heavily spotted with black, below. The tail is rather darker than the body. This specimen lacks the black throat band and the black labial sutures typical of melanoleuca. The large mobile eyes are rather striking. In captivity this specimen has quickly settled down and is much less nervous than the other cobras. The only food so far taken is a dead rat.

From a conversation with Mr. Odendaal, whose farm covers one side of Mount Silinda, we gathered that both Dendroaspis angusticeps and Bitis g. gabonica occur there. A Green Mamba was collected at the Mission in 1930. The Expedition achieved it's main objective, in adding Naja melanoleuca to the S. Rhodesian List, which is as much as I dared hope for in three days! Nevertheless, this area will repay more thorough investigation.

#### DISTRIBUTION OF THE RACES OF THELOTORNIS KIRTLANDII.

It is very difficult to separate Thelotornis kirtlandii into clear-cut geographical races, for there are extensive areas of intergradation between the various forms. No final assessment of the situation can be made until long series have been collected throughout the range of the species. I shall here attempt to outline the position as it appears at present.

The typical form, Thelotornis kirtlandii kirtlandii Hallowell, is found in the forests of the Congo, extending east into forest islands of East Africa. This race is distinguished by the uniform green crown of the head and the immaculate white upper labials.

Thelotornis k. oatesii (Gunther) is intermediate between kirtlandii and capensis and ranges from Angola, through north Bechuanaland, Northern Rhodesia and the north-west of Southern Rhodesia to the lowlands of Nyasaland. This race normally has the top of the head green, with black and pink speckling more or less confined to a Y-shaped marking, with it's stem on the interparietal suture and the arms extending across the supraoculars. The upper labials are speckled with black, mainly concentrated in a wedge extending diagonally from eye to mouth.

Thelotornis k. capensis A. Smith extends from Tanganyika, south through Mozambique to Natal and west through the highlands of Nyasaland, the south-east of Southern Rhodesia and south Bechuanaland into the Transvaal. As in oatesii the upper labials are speckled with black, typically the black and pink speckling extends to cover the top of the head. This character cannot be relied upon for Tanganyika snakes have the Y-marking typical of oatesii and specimens from the Eastern Districts of Southern Rhodesia have

uniform greenheads or just a few spots arranged in a Y. Thus oatesii and capensis can be separated only by their ventral counts.

The variation in the three races is as follows:

	Ventrals.	Subcaudals.	Head Markings.
<u>T.k.kirtlandii</u> (153-)	173-189	137-175	Uniform.
<u>T.k.oatesii</u>	163-176	140-159	A "Y".
<u>T.k.capensis</u>	146-164	127-166	Speckled, a "Y" or uniform.

Loveridge(1944) gave 153 as the minimum ventral count for kirtlandii in his Key to the genus, but it seems likely that the position has been confused by a population of kirtlandii X capensis intermediates where the races merge in East Africa. Schmidt(1923) gave a ventral range of 173-189 for 15 snakes from the Congo Belge.

The situation in the Federation is as follows. In Northern Rhodesia T.k.oatesii is found throughout the territory, except for occasional capensis from along the eastern border. In Nyasaland Loveridge recorded capensis from the forested highlands and oatesii from the lowland savanna. In Southern Rhodesia T.k.oatesii occurs in the north-west and has been recorded from: Trelawney; Norton; Gatooma; Bulawayo; Khami Dam and Matopos. Typical T.k.capensis have been recorded from: Salisbury District; Selukwe; Balla Balla; Irisvale; Sinkukwe and Lumane. In the Eastern Districts (Odzani; Odzi; Umtali; Mount Silinda) there occurs a population of Vine-Snakes with uniform or very sparsely speckled heads. In these specimens the normal black and pink band on the side of the head is replaced by a narrow dark brown stripe. As these snakes are more slender than the specimens from the Balla Balla - Lumane area, they may be found to represent a distinct race when more intermediate material is available.

#### SPECIES OF THE GENERA XENOCALAMUS AND CHILORHINOPHIS OCCURRING IN RHODESIA.

The least known African species are the fossorial forms; many are known from only a few specimens and very little is known of their diet or habits. These are the species that Association members should concentrate upon, for there is unlimited scope for original observation in this field. In a future article I shall summarise my own observations on the feeding habits of snakes of the genera Calamelaps and Aparallactus. Here I shall deal with two of the less well known genera, Xenocalamus and Chilorhinophis; both belong to the back-fanged group of colubrids.

Xenocalamus can never be mistaken for anything else, although it bears a slight resemblance to the related genus Calamelaps. The head is small, elongated, depressed and not distinct from the neck; the rostral is large and pointed, the eye very small with a round pupil. The body is very slender and cylindrical with smooth scales, the tail short.

The genus ranges from the southern Congo Belge south through the Rhodesias, Angola, South West Africa, Bechuanaland and Transvaal to the Orange Free State, then east to southern Mozambique. Two species are known to occur in Rhodesia.

Xenocalamus bicolor bicolor was described by Gunther in 1868 from a specimen collected on the Zambezi. It extends south into the northern Transvaal. Subspecies are found to the west and south of the typical form. That appears to be the third known specimen of this rare snake is in the National Museum and comes from Maritzani, a locality not yet traced.

Variation: Midbody scale rows 17; ventrals 201-220; anal divided; subcaudals 24-31. The unusual head shields are shown below, note the prefrontals pushed out of place and reduced in size so that they resemble preoculars. This species is blackish above, yellowish-white below. Largest recorded 469 (430-39) mm.

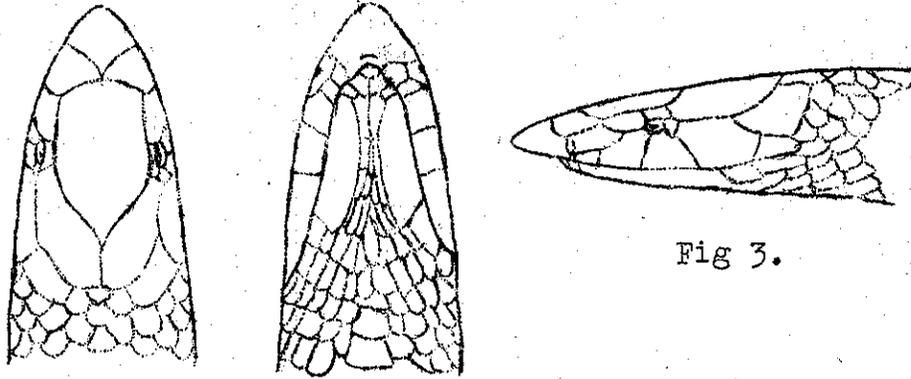


Fig 1.

Fig 2.

Fig 3.

Xenocalamus bicolor bicolor Gunther

Fig. 1. Head from above. Fig. 2. Head from below.  
Fig. 3. Head from the side. (After Gunther)

Xenocalamus mechowii mechowii was described by Peters in 1881 from Angola; it is also found in the southern Congo Belge and Northern Rhodesia. The Rhodesian specimen is from Senanga, Barotseland and is in the National Museum.

Variation: Midbody scale rows 17; ventrals 227-266; anal divided; subcaudals 28-36. This species differs from bicolor in the absence of a supraocular and has two tiny postoculars (1 in bicolor). The colouration may be similar to that of bicolor, but northern specimens have a double dorsal series of blackish blotches, more or less square in shape, sometimes converging to form cross-bands (Witte & Laurent). Largest recorded 740 (685-55) mm.

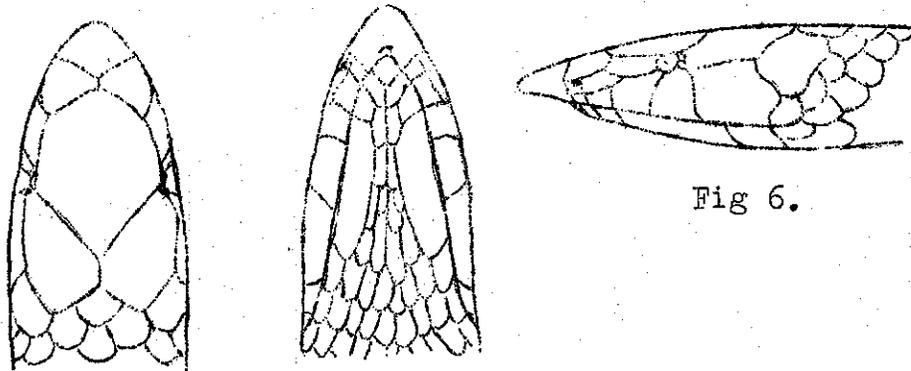


Fig 4.

Fig 5.

Fig 6.

Xenocalamus mechowii mechowii Peters

Fig. 4. Head from above. Fig. 5. Head from below.  
Fig. 6. Head from the side. (After Witte & Laurent)

The snakes of the genus Chilorhinophis are again most distinctive in appearance. All have a small head not distinct from the neck, a greatly elongated body and a short, blunt tail marked with black and white to resemble the head. The body is yellow with narrow black longitudinal stripes.

The genus ranges from the Sudan south through East Africa to Mozambique and west into the Congo Belge and Rhodesia. Two races of Chilorhinophis gerardi are found in Rhodesia. The typical form has been recorded from Kasempa in Northern Rhodesia and Lukosi, Karoi and Sinoia in Southern Rhodesia. The eastern race tanganyikae was originally described by Loveridge from Nyamankolo, N. Rhodesia, which is at the southern end of Lake Tanganyika.

The races are distinguished by their ventral and subcaudal counts:

	Ventrals.		Subcaudals.	
	Males.	Females.	Males.	Females.
<u>C.g. gerardi</u>	263-294	306-348	27-31	20-26
<u>C.g. tanganyikae</u>	308-310	375	25-26	23

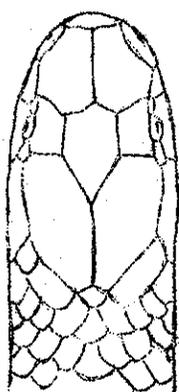


Fig 7.

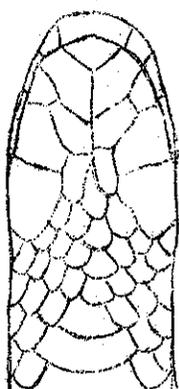


Fig 8.



Fig 9.

Chilorhinophis gerardi gerardi (Boulenger)

Fig. 7. Head from above. Fig. 8. Head from below.  
Fig. 9. Head from the side. (After Witte & Laurent).

Nothing seems to have been recorded of the diet of this species, but several specimens of Chilorhinophis c. liwaleensis from Tanganyika contained amphisbaenids (Amphisbaena ionidesii).

When disturbed Chilorhinophis apparently has the habit of retreating backwards, with its tail raised in the air to simulate the head, which it closely resembles. The tail may be less vulnerable, but one wonders if this behavior is of much survival value to the species. These snakes are liable to be found under dead leaves and heaps of rotting vegetation.

OCCURRENCE OF DIPSADOBOA SHREVEI IN NORTHERN RHODESIA.

Dipsadoboa shrevei is an arboreal species which seems to bridge the gap between Crotaphopeltis h. hotamboeia of the savanna and the much elongated arboreal species of Dipsadoboa found in the Congo Rain Forest. The species was described from Angola by Loveridge and C.J.W. Fleming collected the first N. Rhodesian specimen at Serenje.

When E.L. McCarthy mentioned in a recent letter that he had sent a 42½ inch Crotaphopeltis to the Liverpool Museum my suspicions were immediately aroused! I asked Captain Pitman to check on this snake, which he kindly did and confirmed that it was indeed D. shrevei. L.D.E.F. Vesey Fitzgerald has taken a juvenile at Abercorn, so the species has a wide range.

This snake looks like a much elongated Crotaphopeltis, indeed Loveridge originally placed it in this genus. In colour it is jet black above, plumbeous below. Variation: Midbody scale rows 19; ventrals 203-221; anal entire; subcaudals 81-91.

THE RACES OF NAJA NIGRICOLLIS OCCURRING IN RHODESIA.

The African species of the genus Naja are sorely in need of revision, particularly Naja nigricollis. Examination of specimens from Northern Rhodesia has shown that two well defined races occur in this territory.

Naja nigricollis crawshayi was described from Lake Mweru by Gunther in 1893. It extends as far south as Lusaka and Fort Jameson. I have also examined specimens from Abercorn; Mumbwa; Kasempa; Mwinilunga and Luanshya. This is a massive cobra, reaching a length in excess of 7 feet. Young specimens are dark grey with a black head and neck and a broad black band on the throat. Adults gradually darken until they are almost black. The black band on the throat persists, the rest of the underside being either uniform greyish or more often yellowish mottled with grey. Variation for 16 specimens from Northern Rhodesia: Midbody scale rows 17-21 (usually 19); ventrals 184-203; subcaudals 55-69.

Naja nigricollis mossambica was described by Peters in 1854 from Tete, Mozambique. This form ranges from south Tanganyika and Nyasaland west into the southern part of Northern Rhodesia, then south through S. Rhodesia and Mozambique into South Africa. It is distinguished from crawshayi by the higher number of mid-body scale rows, colouration and smaller size. Only two of 71 Southern Rhodesian specimens exceeded 5 feet in length. This race is very consistent in colouration, being light grey-brown or olive above, with black edged scales; pinkish or yellowish white below, with a series of irregular black blotches or bands on the throat. Variation for 71 Southern Rhodesian specimens: Midbody scale rows 21-25 (usually 23); ventrals 182-203; subcaudals 54-70. The two Northern Rhodesian specimens (from Chilanga and Chipongwe) fall within this range and agree in all respects with material from south of the Zambezi.

#### THE CASE HISTORY OF A BITIS ATROPOS BITE.

"W.W. Armitage of Umtali was bitten on the thumb at 9.30 am. on 12.xii.57 by a 5½ inch Bitis atropos from Inyanga North. One fang penetrated deeply, the other merely scoring the surface. Cuts were made through the fang punctures, but little bleeding was induced by squeezing. By 9.45 the thumb had begun to swell up and was very painful, the pain eased off after 15 minutes. By 10.15 the patient was lightheaded and had difficulty in focusing his eyes. This became worse and the sense of balance was also impaired. By 11 am. the patient was staggering and crosseyed, the eyes being heavy-lidded and vision blurred. Armitage then received a total of 3 c.c. polyvalent serum in thumb and biceps. He was admitted to Hospital 10 minutes later, now only semi-conscious and staggering. He had by now lost all sense of taste and smell. The patient was given 20 c.c. of polyvalent serum in the buttocks, then put to bed. By 11.30 the hand was swollen up to the wrist; the pupils were dilated and showed no reaction to light. By noon the patient was fully conscious.

Armitage's condition showed no change on the following day, followed by a slight improvement on the 14th. By the 15th, the hand was back to normal, the thumb remaining swollen. The pupils were normal, but the left eyelid remained closed, the right being half open. Still no sense of taste or smell. Both eyelids were open the next day and Armitage was discharged from Hospital. The sense of smell returned on the 17th; focusing of eyes still slow. Sense of taste returned the following day. The site of the bite was numb, there was no sloughing of the flesh round the fang punctures, which is usual in viperine bites."

(Extract from "The Herpetology of Southern Rhodesia. Part 1... Snakes." by D.G. Broadley).

The symptoms in this case are those associated with a neurotoxin. As this seemed rather remarkable for the venom of a viper, I asked the Serum Department of the South African Institute for Medical Research for their comments. They replied that the only sample of Bitis atropos venom tested behaved exactly like the venom of Naja nivea!