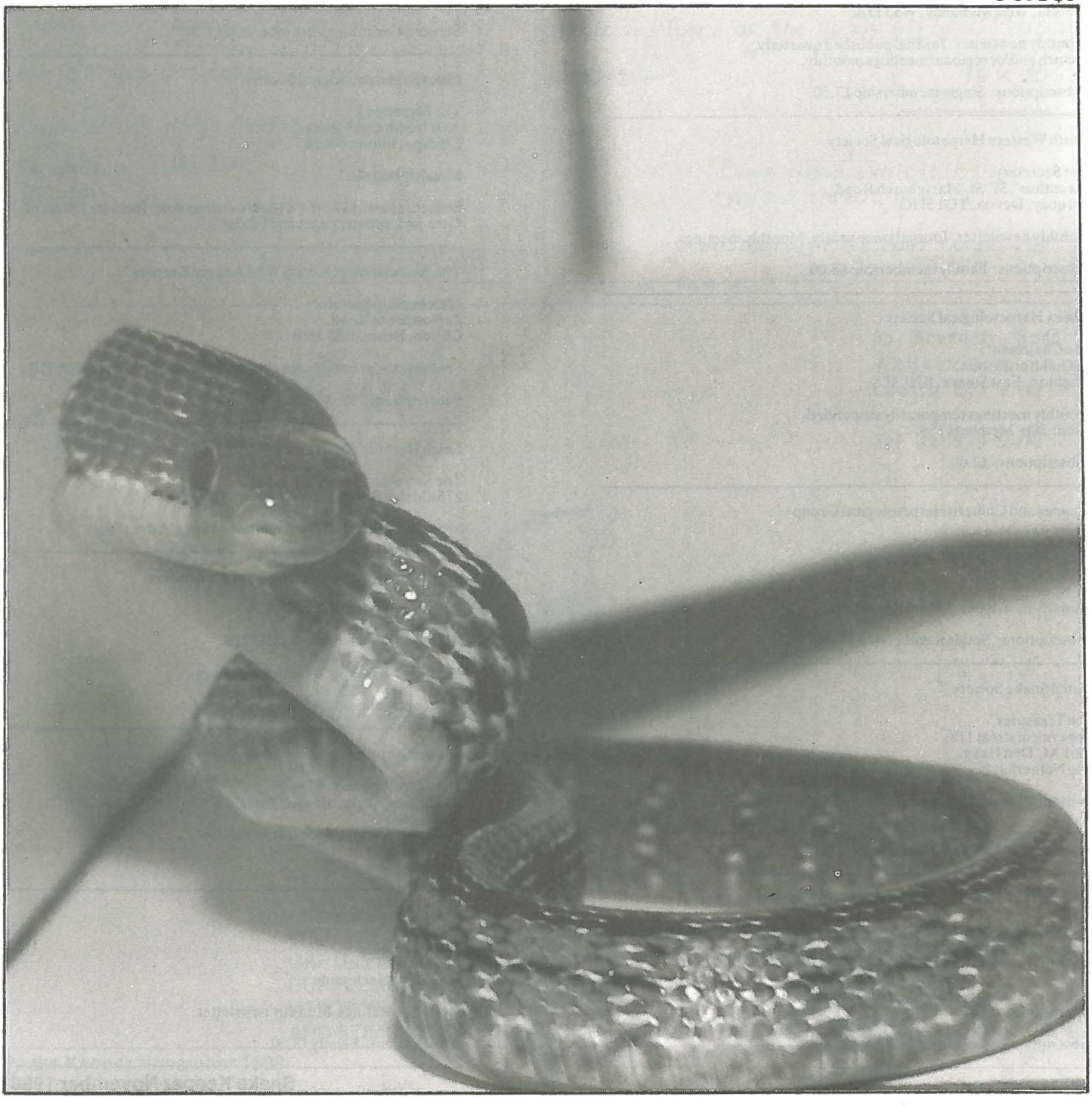
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INFORMATION

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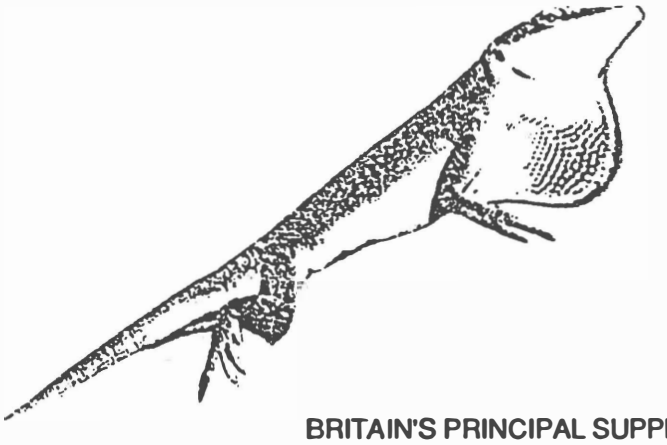
Front cover: Elaphe radiata
Young snake exhibiting typical threat posture.

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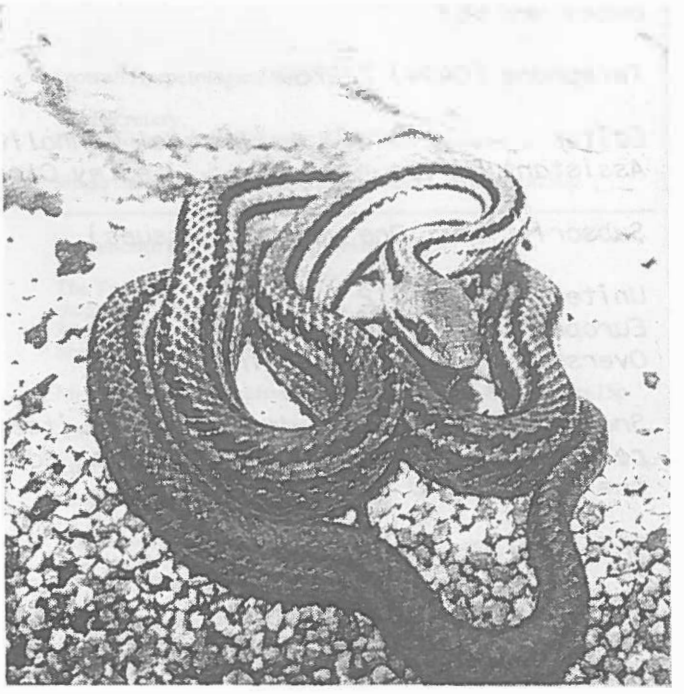
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Asian Rat Snakes of the *Elaphe* Genus
Part IX *Elaphe quadrivirgata* (Boie, 1826)

by Klaus-Dieter Schulz

This series of articles was originally published (beginning in 1985) in the magazine 'Sauria' and is reproduced here by kind permission of the author.

Translated from the original German by John Hackworth.



Elaphe quadrivirgata Photo: K-D Schulz

Introduction

The Japanese Four-lined or Red-Eyed Rat Snake is one of the most frequently imported Japanese snakes. Even though here we are dealing with a true Rat Snake, in appearance it is much more reminiscent of a terrestrial Coluber species. On the many Japanese islands E. quadrivirgata has evolved numerous colour variations. The two best known of these are the normally coloured variety and the melanistic variety which has also been designated as Elaphe quadrivirgata f. atra (Jan, 1867).

The normally coloured animals have a brown to olive ground colour. Along the dorsal side there are two pairs of dark brown to black stripes. The two upper and somewhat wider stripes reach to the tail as opposed to the narrower stripes on the side which stop in the anal region. The upper side of the head is unicoloured. A black line runs from the corner of the eye to the corner of the mouth. The red eyes have a black pupil. The upper and lower labial scales are usually yellowish. The cream coloured ventral side is covered with insignificant grey spots. Animals in which the pattern is partially or totally missing have also been recorded. The males are more slimly built than the females and are usually shorter.

According to their origin the size of this species can vary between 120 and 150cm. On the islands of the Izu group there is a population of animals which sometimes reach a length of 250cm. Colour-wise these belong to the normal variety (Goris, written report). Amongst themselves the melanistic varieties are also very variable. As well as completely black specimens, animals are also found in which the front half of the body is flecked or even striped with white. I even saw an adult animal which only had white upper and lower labial scales.

To date no sub-species have been described. Earlier the melanistic animals were designated as the only sub-species. Today, however, this thesis has been withdrawn. Nevertheless a careful examination of all the different forms should prove that one or two sub-species do, in fact, exist.

Distribution and Habits

Like Elaphe climacophora, this species is also represented on all Japanese islands (eg. Hokkaido, Honshu, Sikoku, Kyusu etc.) and on the Soviet island of Kunasir. As a snake which is predominantly diurnal, E. quadrivirgata can be found in varying biotopes; in this respect the various colour forms do not show any kind of variable preferences. One preference, however, is for a moist biotope such as that found on the island of Kunasir (Terenter 1949). The snakes live both on flat land and the central hills. In some areas they have even become followers of civilisation.

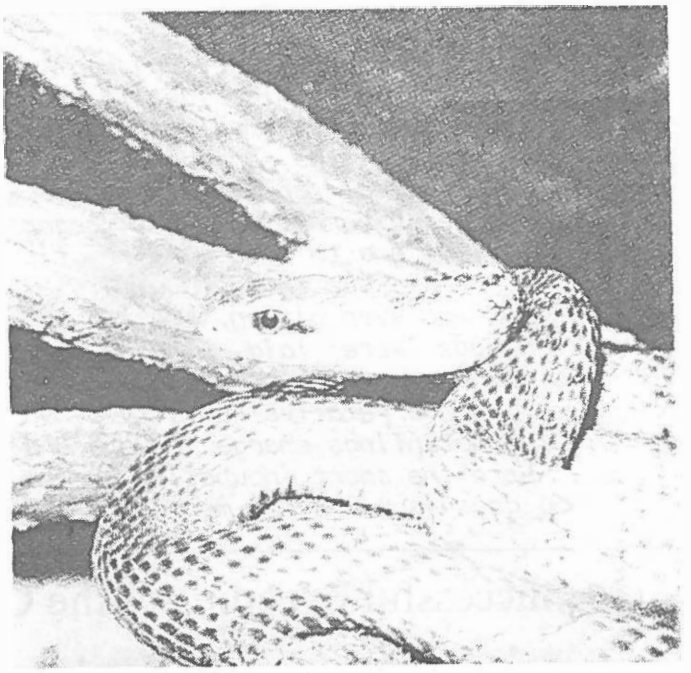
Their food consists mainly of amphibians,

reptiles and small mammals. They are also supposed to eat the eggs of turtles, snakes and birds (Goris, written report). Another population consisting of only melanistic animals on the island of Izu-Oshima has specialised in eating lizards. In comparison the snakes of this island are very small (Goris, written report).

The mating season is in April and May and sometimes even in June or July. The number of eggs depends to a large extent upon the size of the snakes and is usually between four and 15. The hatchlings emerge with an average length of 30cm. The colour of the hatchlings of the striped variety is reddish-brown with dark transverse spots. In the black variety the babies are usually completely black or occasionally with white on the labial scales. From the clutch of a normally coloured animal, melanistic as well as normal hatchlings can be born and the same is also true in reverse (Goris, written report). After laying her eggs, sometimes the female remains coiled around them for one or two days (Fukada 1959) or, in Orlov's case (1982), for up to 8 days.

Maintenance in the Vivarium and Reproduction

Elaphe quadrivirgata needs a medium-sized container; a vivarium of 90 x 50 x 50cm is sufficient for a pair. As is the case for other Rat Snakes, the furnishings can consist of several stout branches, one or two pieces of flat rock or cork bark as hiding places and a water container. As substrate I chose a sand/peat mixture which is always kept moist in one place. E. quadrivirgata is a very agile snake which, in spite of being very shy at first, soon settles down to life in the vivarium. Wild-caught animals react very nervously and hectically to any disturbance. If they are threatened they coil up and hide their head beneath their coils or they coil their body into an 'S' shape and strike. In general however the behaviour of this snake in the vivarium can be described as peaceful. For most of the time these snakes lie near or half in their hiding place. I have constructed hiding places from flat rocks stacked on one another. E. quadrivirgata always hold their heads slightly raised, which again reminds one of the Coluber species. In this position the snakes can probably survey a much larger area. If they are surprised they sometimes vibrate their tails against the substrate.



Elaphe quadrivirgata
(Variety without stripes) Photo: H. Zabka

My animals are fed on laboratory mice which, after being seized, are prompty constricted by several body coils. Dead mice are also taken willingly but in this case medium-sized mice are preferred. Prey which is too large is usually ignored or left lying after being killed. When live mice are fed the snakes are generally very cautious, gliding around the prey to ensure that the head of the victim is bitten.

Elaphe quadrivirgata can be bred if they are properly maintained. According to Strauch (Stukr-Brinkum) (written report) a melanistic pair of these snakes mated. In July the female became very restless and began burrowing in the substrate. This was taken as an indication that she was ready to lay. On the 7th of July 1986 nine eggs of 30 x 20mm were laid in a clump in a box containing moist peat. The incubation was carried out in the same way as described in earlier articles in this series. The temperature was between 28 and 29 degrees C without being cooled at night and the relative humidity was 80 to 90%. Between the 25th and 26th of August a total of six hatchlings emerged. The incubation therefore took 49 to 50 days. The remaining three eggs were opened six days later; they contained fully-developed but dead young. The young E. quadrivirgata measured on average 30cm and weighed 7 to 8g. Outwardly all hatchlings appeared to be healthy and were predominantly black. The only white was on their throats and labial

scales.

For the first two months the young had to be force-fed with pink mice until they were able to take food themselves. Orlov (1982) reports on the breeding of a normally coloured pair of this species. One month after hibernation they began mating activity and this took a hectic course. The female was followed wildly by the male and was even bitten. On the 2nd of June 8 eggs were laid. These were incubated on damp sphagnum moss at 27 to 30 degrees C and a relative humidity of 90 to 100%. All hatchlings emerged on the 3rd of July. Here the short incubation period of only 31 days is worthy of mention. This is significantly below the normal of 40 to 57 days (Fukada 1965). Here I suspect that it was a case of specimens from the island of Kunasir which is the northernmost limit of their distribution range. It can therefore be assumed that the specimens found there have adapted themselves to the prevalent climatic conditions resulting in shorter incubation periods and a more rapid embryonic development. This is already known of other reptiles of the temperate regions.

Asian Rat Snakes of the Elaphe Genus, Part X, Elaphe flavolineata, will appear in next month's issue.

Successful Breeding of the Cuban Boa – *Epicrates angulifer*

by Gerd Horlbeck

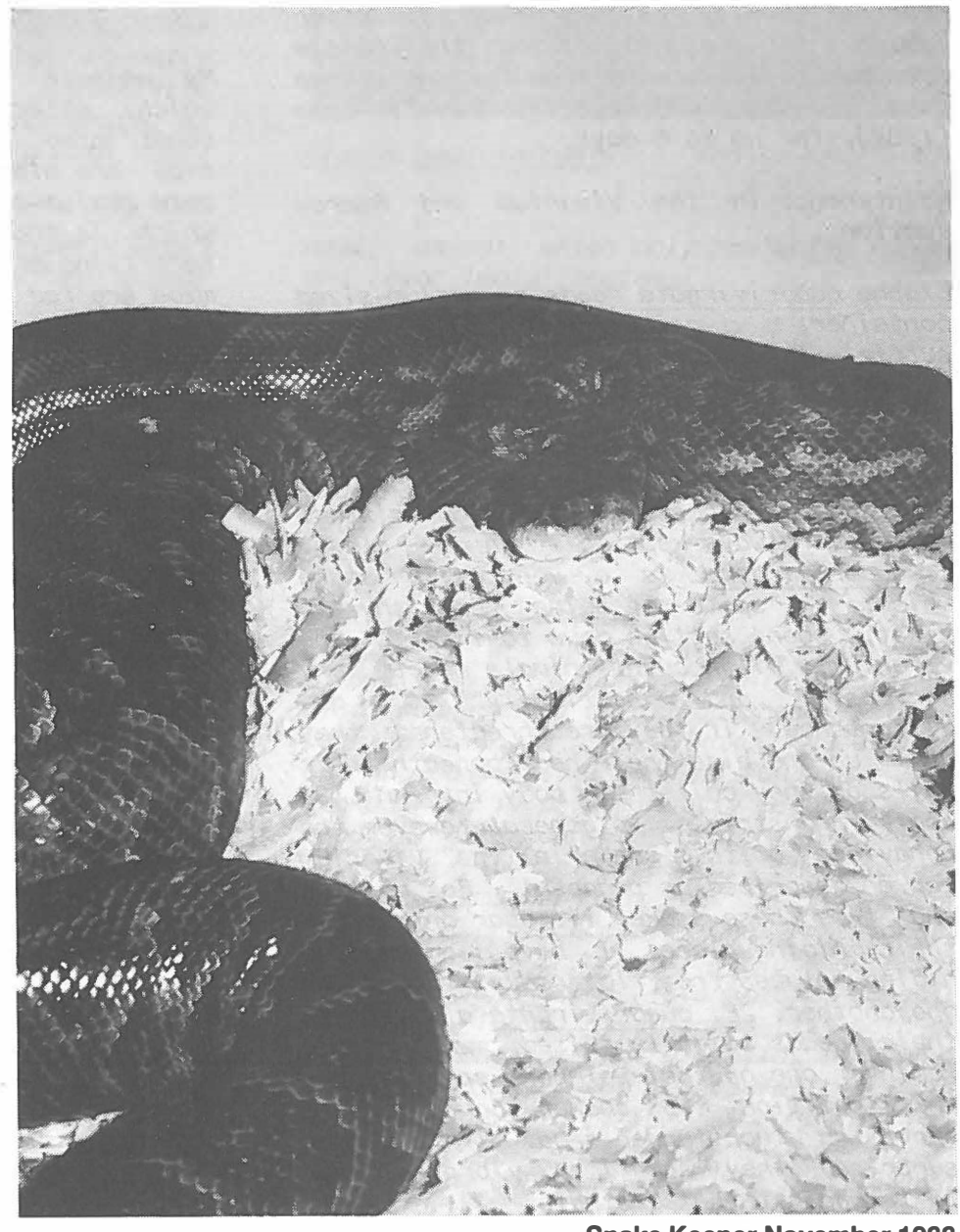
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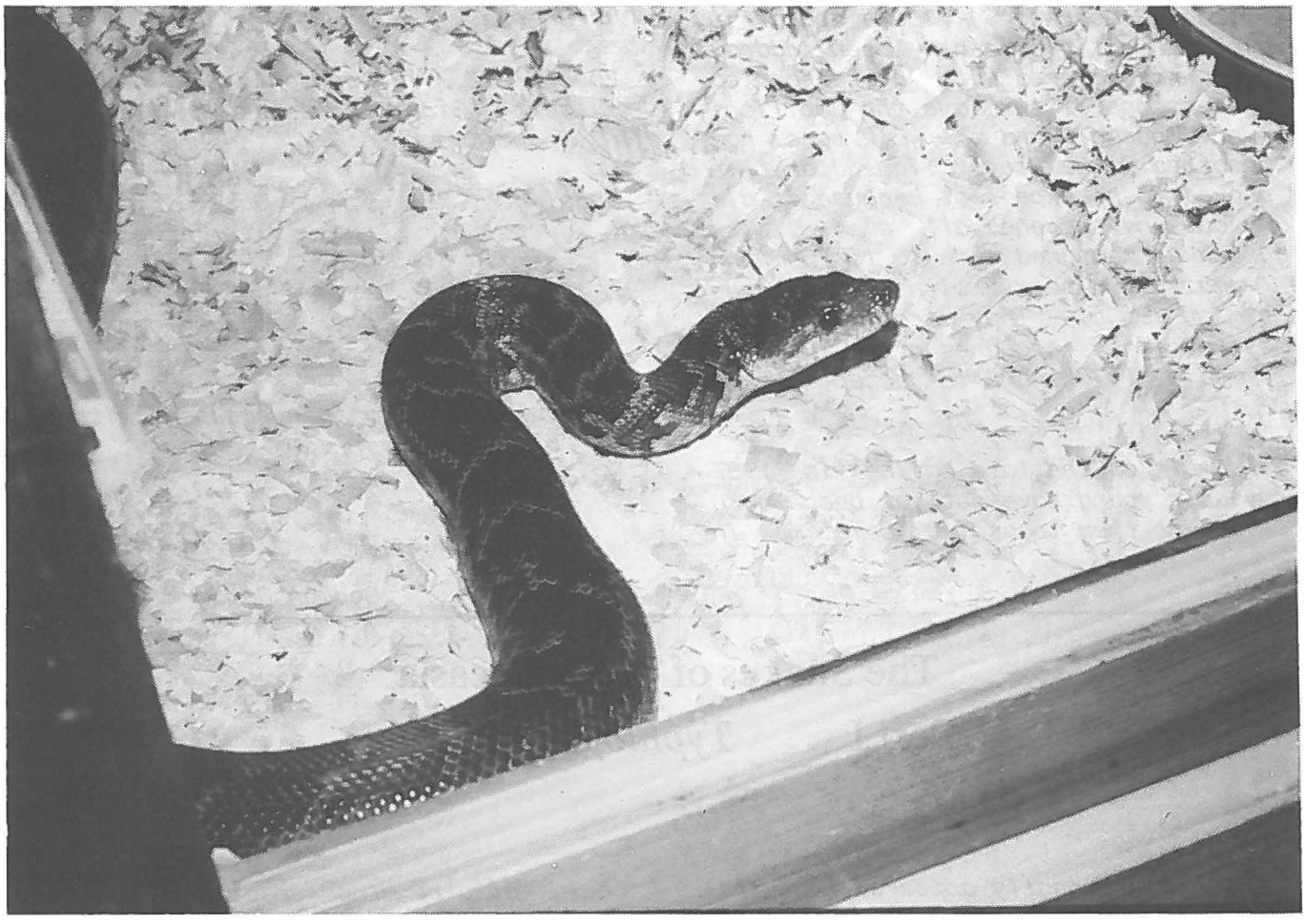
Translated from the original German by John Hackworth.

The genus Epicrates contains seven species one of which, Epicrates angulifer (the Cuban Boa), only occurs on the island of Cuba.

In 1982, by way of exchange, I received two one-year-old specimens which a colleague in Czechoslovakia had bred in captivity. Unfortunately it soon became obvious that both specimens were male. Another colleague in Halle had a female in his collection and in 1984 we decided to form a breeding partnership. This however did not result in any young.

In October 1984, again by way of exchange, I finally obtained a two-





year-old wild caught female. The female is a much lighter colour than the male (see Vogel, 1973).

Vivarium

The vivarium is made from wood with a glass front and measures 140 x 130 x 90cm (l x b x h). The substrate (wood shavings) is contained in a plastic tray. A strong climbing branch, a resting shelf and a water container complete the furnishings. The heating comes from a 250 watt Dark Heater regulated by a thermostat. The base is locally heated to 30 degrees C. In the vivarium there is a temperature variation from 20 to 38 degrees C (below the heater). The vivarium is illuminated by daylight and fluorescent tubes. Relative humidity is around 50 to 70%. The E. angulifer are housed together throughout the year.

Mating

Around the middle of August the males began to pursue the female and to fight amongst themselves but no actual injuries were caused. The males tried to force one another away from the female by raising the front part of their body and trying to press one another to the ground. These mating conflicts persisted until the end of September during which frequent copulations were observed. Several of these copulations lasted a number of hours. The matings of 1985 and 1986 followed this ritual behaviour. The 1987 mating only began in October and lasted until mid-November. I assume that the decisive factor here was the peculiar weather which we experienced during 1987. After the mating period peace again prevailed and all animals started eating again. During the mating period only the female ate, a phenomenon which I have also been able to observe with Eunectes notaeus (Yellow Anaconda).

From mid-November the female refused all food and her girth increased visibly. At the end of December 1985 and the end of January 1986 the female became very restless. On the 8th of January 1986 at around 4.30pm she gave birth to six young and two infertile eggs. The following year on February 4th at around 3.30pm she gave birth to eight young and three infertile eggs. The young of both clutches had an umbilical cord almost as thick as a pencil and in several cases the the yolk-sac had not been fully absorbed. I decided therefore to house each of the young snakes in a round glass jar which had first been filled to a depth of 1.5cm with

pre-heated (32 degrees C) liquid paraffin to which an antibiotic had been added. Each jar was covered with a perforated lid. After one or two days the umbilical cords were 'normal' and the yolk sacs had been absorbed. The use of liquid paraffin was proved to be expedient because it did not dry out and screened all smells. The young snakes measured some 70 to 75cm and were amazingly heavy with an average weight of 250g. They are all very aggressive. They sloughed after 14 days and immediately began to accept young mice.

As a result of the late mating in 1987 this year's young have not yet been born and I expect them to arrive sometime in May.

References

Vogel, Z. 'Riesenschlangen aus aller Welt' (Giant Snakes of the World), Neue Brehm-Buecherei, Wittenburg (1981).

Engelmann, W. E. & Obst, F. J. 'Mit gespaltner Zunge' (With Forked Tongue') Leipzig (1981).

Photographs: Gerd Horlbeck

I would be happy to correspond with other herpetologists in any country. Please write to:

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The Snakes of Transcaucasia

Part I *Typhlops* and *Eryx*

by Dieter Schmidt

This article originally appeared in the magazine 'Aquarien-Terrarien' in the German Democratic Republic and is reproduced here by kind permission of the author.

Translated from the original German by John Hackworth.

Under the auspices of the Cultural Society of the G.D.R., we in the Herpetology Working Group undertook our second expedition to Tbilisi and Yerevan, the capitals of the Soviet Republics of Georgia and Armenia. The purpose of the expedition was to examine the herpetofauna of these areas. As herpetologists we were surprised at the number of species and the sheer density of population of the Transcaucasian herpetofauna. The present article will give a short description of the snakes which we found and the habitats in which they live.

For the areas around Tbilisi and Yerevan, Bannikov et. al (1971) cite a total of 22 varieties of the sub-order snakes (Serpentes). The members of our expedition were able to find 18 species and subspecies (See Table 1).

According to the distribution maps published by Bannikov et. al (1971) there could also be other species in the areas we visited. These are listed in Table 2.

In the Soviet Union the Leopard Snake (Elaphe situla) is only found in very restricted areas in Southern Crimea, in the Northern Caucasus at Pyatigorsk and in Transcaucasia in the Tbilisi area east of Lake Sevan. The question of how often E. situla is mistaken for the similarly marked Elaphe hohenackeri must remain open. The attractive Dione's Rat Snake (Elaphe dione) is widely distributed. Its range of distribution extends from Armenia to the Sea of Japan. We also found some Malpolon monspessulanus, those ophistoglyphic snakes which belong to the family of lizard-eaters. These can be found eastwards from Armenia to the Caspian Sea. Along the valley of the Arax, especially in the area of the USSR-Iran frontier, specimens of Rhynchocalamus melanocephalus can also be found. These small snakes only reach a length of 36cm. However we were unable to find any of these brightly coloured snakes. The Transcaucasian subspecies of the Sand Viper (Vipera ammodytes transcaucasiana) occurs around Tbilisi and the more westerly highlands. This snake is distinguished from other species of the genus Vipera by having a soft horn on the tip of its snout. It usually grows to around 60 to 70cm in length.

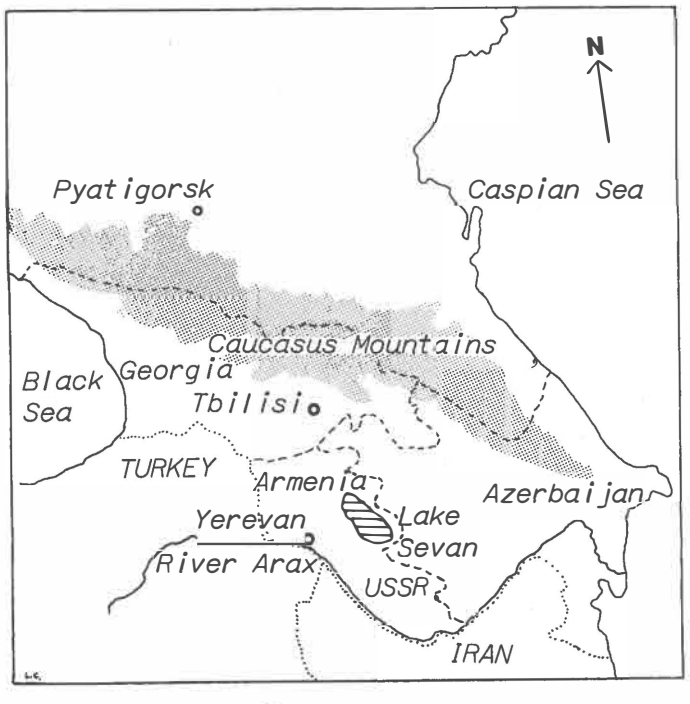
Table 1

Typhlops vermicularis (Merrem)	Worm Snake
Eryx jaculus familiaris (Eichwald)	Western Sand Boa
Natrix natrix persa (Linne)	Striped Grass Snake
Natrix tessellata tessellata (Laurenti)	Dice Snake
Coluber jugularis schmidti (Nikolsky)	Large Whip Snake
Coluber najadum najadum (Eichwald)	Dahl's Whip Snake
Coluber ravergieri chernovi (Mertens)	Ravergier's Whip Snake
Coluber ravergieri plumbeus (Tschernov)	Ravergier's Whip Snake
Elaphe hohenackeri hohenackeri (Strauch)	Transcaucasian Rat Snake
Elaphe quatuorlineata sauromates (Pallas)	Eastern Four-lined Snake
Coronella austriaca austriaca (Laurenti)	Smooth Snake
Eirenis collaris (Menetries)	Collared Dwarf Snake
Eirenis punctatolineatus punctatolineatus (Boettger)	Armenian Dwarf Snake
Eirenis modestus modestus (Martin)	Asia Minor Dwarf Snake
Telescopus fallax iberus (Eichwald)	Caucasian Cat Snake
Vipera ursini renardi (Cristoph)	Orsini's Viper
Vipera xanthina raddei (Boettger)	Ottoman Viper
Vipera lebetina obtusa (Dvigubsky)	West Asian Blunt-nosed Viper

Table 2

Elaphe situla (Linne)	Leopard Snake
Elaphe dione (Pallas)	Dione's Rat Snake
Malpolon monspessulanus (Hermann)	Montpellier Snake
Rhynchocalamus melanocephalus (Jan)	Black Headed Snake
Vipera ammodytes transcaucasiana (Boulenger)	Nose-horned Viper

To be able to give a complete climatic survey of the areas which were visited would far overstretch the framework of this article. In the Tbilisi area a continental climate prevails with very hot summers (mean July temperature 24 degrees C) and moderate winters (mean January temperature 0.5 degrees C). At the time of our expedition, in mid-June, the area around Tbilisi experienced very changeable weather with temperatures around 25 degrees C. There were often very strong and stormy winds blowing in from the Caucasus and these brought very heavy showers. Fortunately the showers did not last long. As a result of these showers the ground was nearly always moist or wet. As a comparison, the temperatures in Armenia were far above 30 degrees C and in Yerevan rose to around 40 degrees C. Yerevan is classed as a city of climatic contrasts. The summers are hot and dry, whilst the winters can be both mild and severe. In Yerevan, at sea level, the temperature occasionally reached 50 degrees C. Low relative atmospheric humidity did, however, make the heat bearable. The mention of the seasonal temperature variations around Yerevan and



Tbilisi, with temperatures dropping to below freezing point, should also serve as an indication that snakes occurring in these areas are compelled to hibernate throughout the winter months. However, now in systematic sequence, I will describe

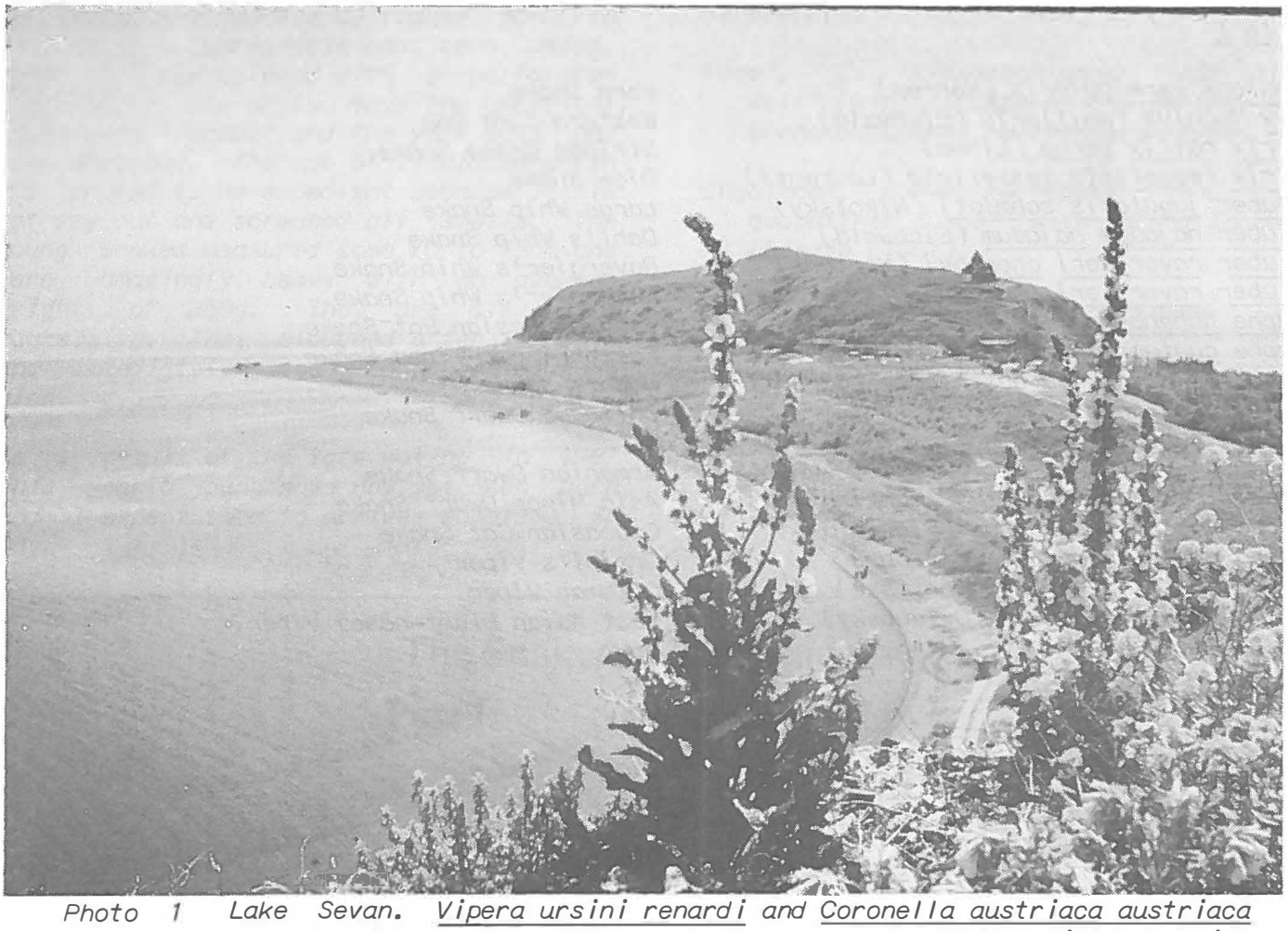


Photo 1 Lake Sevan. Vipera ursini renardi and Coronella austriaca austriaca were found here. *Photo: Dieter Schmidt*

the snakes we found in Transcaucasia.

The Worm Snake - Typhlops vermicularis which has adapted to a life spent completely underground belongs to the most primitive order of snakes. The genus Typhlops with almost 200 species is distributed over several continents. The Worm Snake is a reddish-brown colour with a lighter underside - and according to Bannikov et.al (1971) grows to a length of 38cm. It was found in the immediate vicinity of Tbilisi under grassy hillocks and under rocks only 100m from a new residential district. At first glance it appears to be an earthworm. It is only when it raises its head to survey the surrounding area better that it exhibits its typical snake-like behaviour. As described in literature it feeds on ants, their larvae and pupae. Animals which were kept in a vivarium by Vogel (1974) would not however eat ants. They also refused any kind of substitute food. The only food they would take were the soft fresh pupae of flies. They find abundant food over their range of distribution. The Worm Snake is a fascinating candidate for the vivarium but it stretches its keeper's patience to the limits and is only rarely seen on the surface of the deep substrate which is necessary for it to burrow into.

Also very seldom seen in vivaria are the subterranean-dwelling relatives of the Sand Snakes. The Western Sand Boa (Eryx jaculus familiaris) (Photo 3) belongs to the family Boidae. It was, like most other snakes we found, burrowed under rocks. Its soft but strong and muscular body with its small, pointed and arrow-shaped head is perfectly suited to moving through loose sand. This attractively marked snake was found in steppe-like territory, on rocky, hilly land in the immediate vicinity of Tbilisi as well as near a reservoir, the so-called Lake Tbilisi. Bannikov et.al (1971) also mentioned that this snake occurs under rocks, in rodent burrows, in gardens, vineyards and fields. Their food consists of small rodents and lizards. According to Klingelhoffer (1959), Sand Boas are great individuals regarding the choice of their food. In Vogel's case (1954) an Eryx jacularis turcicus preferred mice before skinks and lizards. At the place where we found Sand Boas near Tbilisi, a considerable part of their diet could consist of the very common lizard Lacerta strigata or even young Agama

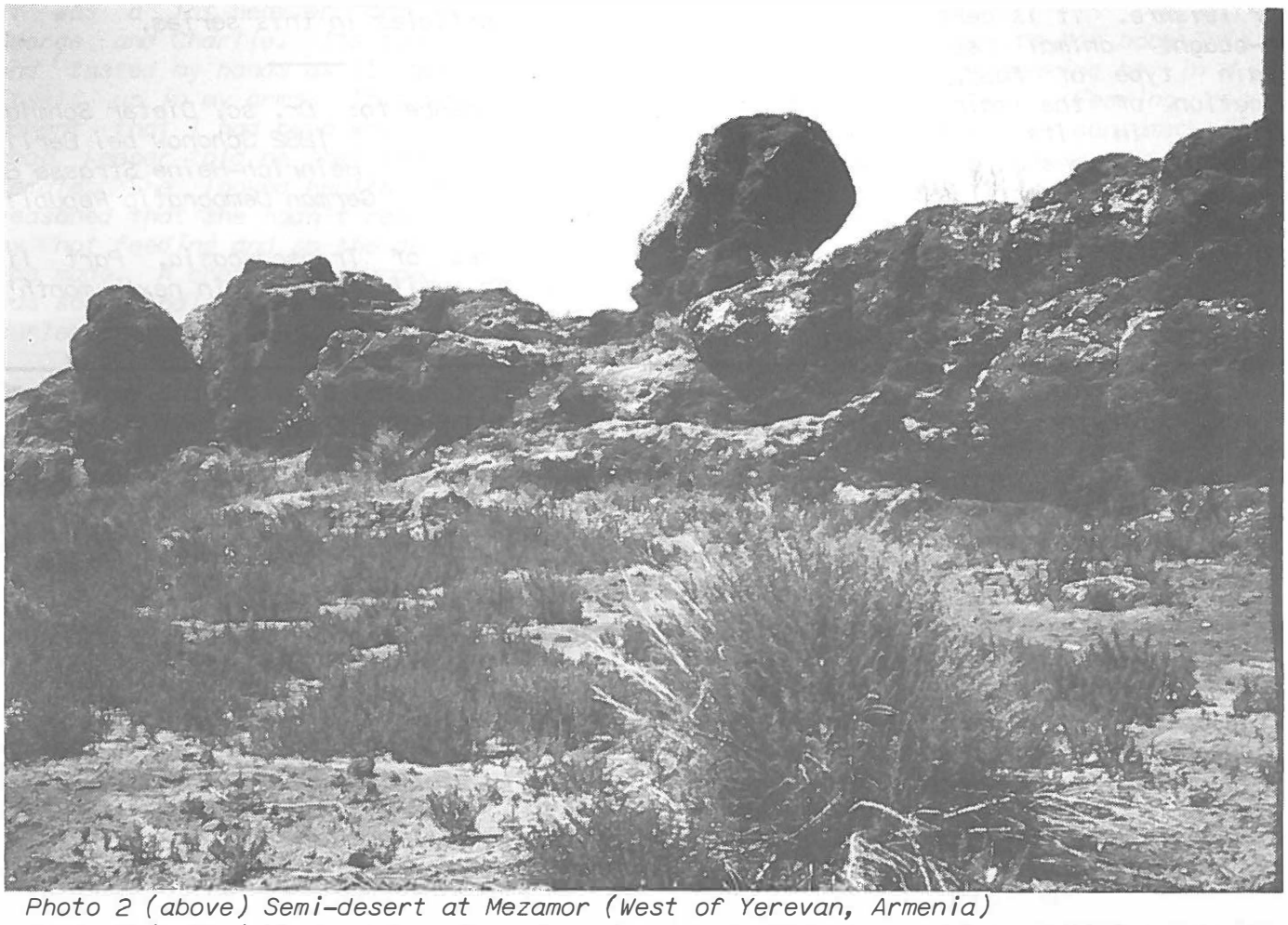
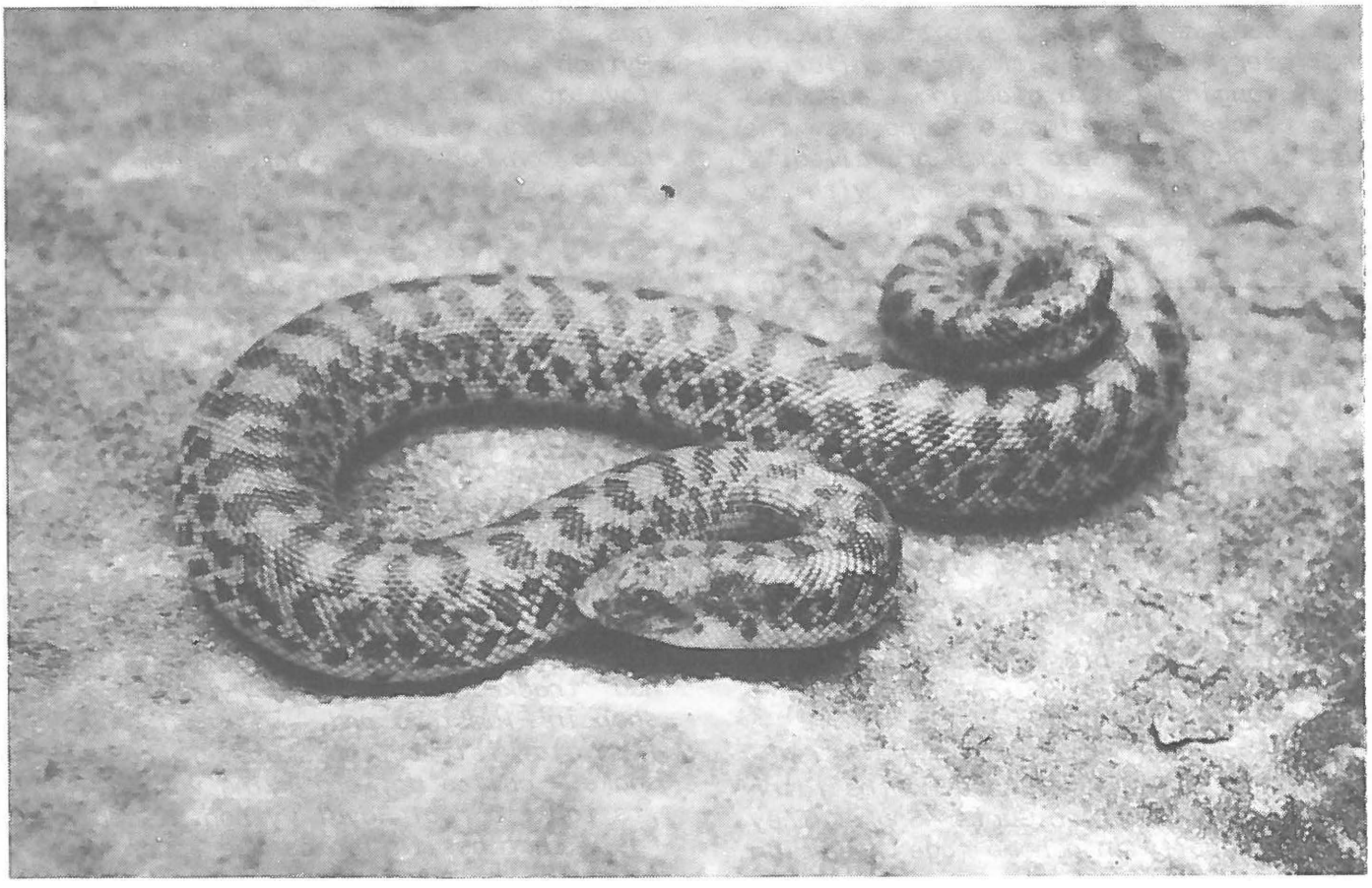


Photo 2 (above) Semi-desert at Mezamor (West of Yerevan, Armenia)
Photo 3 (below) Western Sand Boa, Eryx jaculus familiaris *Photos: Dieter Schmidt*



caucasia. Nevertheless half-grown, wild-caught animals immediately accepted young mice which were constricted in the manner of the giant snakes and then swallowed at

their leisure. It is certain that when a wild-caught animal specialises in a certain type of food, this is an indication of the main supply of food available in its natural habitat. Fundamentally we should not keep animals which eat other reptiles when the only food we can offer are our own indigenous lizards or snakes which are protected.

The other snakes which were seen or caught in Transcaucasia will be the subject of further articles in this series.

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The Snakes of Transcaucasia, Part II, Colubrids, will appear in next month's issue.

Snake Keeping – The bug that keeps on growing

by Steve Grayston

(Anthropomorphic type - Partofii famillii)

It's funny how childhood memories can remain dormant and then, totally unexpectedly, resurface years later in adulthood. I can still clearly see the tiny green snake darting around in a glass tank on the market stall and I can remember my mother's answer to the question "Mum, can I buy that snake?" equally clearly. Her emphatic "No you can't!" merely suppressed a sudden desire to be a snake keeper.

So there I am in a pet shop some twenty years later, married with three children, gazing longingly at a gleaming Red-sided Garter Snake and trying to suppress the desire to buy it. Good sense prevailed. I managed to walk from the shop with my wife, three children and no snake.

My wife, Sue, asked the fatal question "You wanted that snake didn't you? Why don't you go back and buy it?" I protested of course "but it seems such a waste of money" but I changed direction and headed back towards the shop. That little Garter Snake, now called George, cost me a lot of money that day. After all, the sudden re-emergence of that snake-keeping desire had caught me totally unprepared and I had to buy everything needed to keep George comfortable. I drove home from that pet shop feeling very pleased with myself. I was now a snake keeper and Mum wasn't there to object.

George was joined some three months later by Charlie, an Eastern Garter Snake. They both live happily in a home made vivarium under the tropical fish aquarium in our living room. They are an excellent talking point for visitors and the children love them. Both Charlie and George are amenable to handling so close contact is possible. You could say that they have become 'part of the family'.

I still remember saying to Sue "don't worry; Charlie and George have satisfied my desire to keep snakes". So how is it that I find myself, one year later, explaining to her "Don't worry; Royal Pythons only grow to a length of six feet at the most." Yes, the snake keeping bug has grown. I saw a picture of a Royal Python in a snake keeping book and it was love at first sight! I scanned the pages of as many snake books as I could lay my hands on for further information on Royal Pythons and they all mentioned that the snakes were difficult to keep and feed. All I wanted was a book that said "Royal Pythons are excellent snakes, go out and buy one now!" Not to be deterred I planned and built a larger vivarium. There was only one condition that Sue required to be fulfilled before a Royal Python became a household pet. "You'll have to keep it in the bedroom", she said, "if any of my friends know there is a python in the house I'll never see them again."

The end of March 1988 saw the completed vivarium in its place in the bedroom; only the python was missing. By April 16th I had tracked down a Royal Python at a pet shop in Plumstead and, with pulse racing, I paid a visit to the shop. There was the snake, coiled up, and lying very still in its tank: a real Royal Python. I can still feel that hesitation as the shop keeper lowered the snake into my open hands. At approximately three feet in length and two inches in diameter (at its largest point)

it was a lot heavier and bigger than George and Charlie. Its tongue flickered and tasted my hands as it gently curled itself up in my arms. This was it, the moment that I had been waiting for. The shop keeper told me that the snake was a female. She looked healthy enough and I reasoned that she hadn't reached that size by not feeding and so the decision to buy was made. A cheque was handed over and I was soon heading home with my new purchase curled up tightly in a cloth bag.

Once home and in the vivarium the snake, now called Mellisa, soon settled down. I had to get used to the idea that she wasn't as lively as George and Charlie but I still spent ages sitting on the end of the bed gazing at her through the glass vivarium doors.

The books were right. As soon as a mouse was introduced into the vivarium Mellisa curled up, hid her head and refused to eat. She kept this up for forty days during which time I changed the floor covering of the vivarium from forest bark to newspaper and changed the heating and lighting from 60 watt light bulbs to a ceramic heater and natural daylight. I also offered mice in various colours. Incidentally she was offered live mice as keeping six live mice was preferable to killing forty which would be wasted.

On May the 27th Mellisa killed and ate her first mouse. From then she was offered one mouse a night which she consumed with great gusto. She stopped eating for a short time to slough which she achieved by coiling herself up and rubbing her coils together to remove the skin. This meant that the skin came off in pieces, one piece remaining stuck to her back. This was easily removed after soaking her in a warm bath for about an hour. Feeding resumed and, to date, she has consumed twenty mice. (She is not fussy about their colour!) Mellisa is filling out nicely now and looks in really good shape.

Why is it, though, that the snake keeping bug refuses to stop growing? On July the 11th I found myself walking from a pet shop in Dagenham with yet another female Royal Python in a cloth bag. The excitement was just as great as when I purchased Mellisa. This second snake was to be called Samantha (Yes, original isn't it but somehow Doris or Edna doesn't suit Royal Pythons.) Although of a similar size to Mellisa, Samantha's markings are lighter and more elongated thus making it easy to differentiate between the snakes.

Mellisa appears to have accepted Samantha quite readily in the vivarium and, needless to say, she continues to feed while Samantha hides her head. I am sure that Samantha will accept food once she has really settled in.

So there you have it. The childhood dream has come true and the snake keeping bug continues to grow. Goodness only knows when it is going to stop. Mum has had to concede that snakes (especially pythons) are not so bad after all. Sue just thinks I'm crazy but I've caught her watching Mellisa and Samantha.

So much for childhood memories. I seem to recall I wanted to be an engine driver...

LETTERS

Snake Keeper
159 Stanley Hill
Amersham
Bucks HP7 9EY

Dear Sir,

We are a group of amateur/hobby herpetologists living in the Leipzig area of the German Democratic Republic and a number of our group members would like to have penfriends in Britain. Between us we keep all manner of snakes, lizards and amphibians. We are particularly keen to get in touch with herpetologists in all parts of the world. You can write to us in German or English and all letters will be answered. Anyone interested in having a penfriend in our country should write to our Group Organiser at the following address:

Angelika Brennecke
Dr. Otto-Nuschke-Strasse 6A
Torgau 7290
German Democratic Republic

Dear Snake Keeper,

On the 16th May this year I exchanged a Boa, who had turned out to be a bit of a thug, for a Royal Python. I know of the potential trouble of hunger strikes and anorexic pythons.

When I obtained the animal, a four foot adult male (I named him 'King Lear'), he weighed about 2lbs. I regularly offered food of differing flavours (mice, rats, gerbils and baked beans!) but he consistently refused to eat. I even tried waving the dead food items in front of his face but all I got was a defensive strike after which the snake disappeared quickly from sight.

Exactly four months later, on Friday the 16th September, Lear's cage needed cleaning out. I took him out of his cage and placed him on the bed whilst I undertook the cleaning.

Being a keen photographer I decided to take some 'baby on the rug' shots of my snake. I prepared my camera and took three or four photographs. I used my flashgun to bounce the light off the ceiling so as not to blind the snake with the direct light (as the flashgun is very powerful).

That night I put a small white mouse in the tank as a last ditch attempt to get him to feed. If he did not feed I was going to force-feed him at the weekend with a couple of pinkies. When I woke up on Saturday morning I was amazed to find the mouse was gone! I was ecstatic. I stripped the tank to see if Lear was being clever and hiding 'fluffy' somewhere. The snake has since fed regularly on mice but he still refuses rats; perhaps they don't taste nice.

Now we get to the moral of this little tale. I know that Royal Pythons don't generally eat during their breeding season. When they do start eating it is at the start of the rainy season. The rainy season starts with thunder and lightning - yes, you've guessed: I think that Lear may have thought when I took my pictures that my flash was in fact lightning.

I know this may sound a bit silly but not being able to read a snake's mind you never can tell, can you? I telephoned the owner of the reptile shop in London where I get my snakes as he is very helpful. When I told him what had happened he said the idea was not as far out as it might at first seem. He also suggested that in the mornings and evenings in Africa there would be a mist so spraying the snake with water will help not only to induce feeding but will also keep the snake's skin in good condition as ceramic heaters dry the skin.

I think what happened could be just a coincidence but, on the other hand, you never can tell. If anybody has an anorexic Royal Python and a flashgun try firing the gun several times in the snake's general direction but NOT straight at it.

At worst the snake will still not eat but at best it will start to eat. Although strange, I think that this idea is worth trying just in case it does work. If Lear goes on hunger strike again I will certainly try it to see what happens. If anyone else tries it I would be very interested in the results, whether positive or negative.

Finally to change the subject to that of substrates. For people who live in or near a town with a 'Jessop Photo Centre' camera shop I have a cheap (can you get any cheaper than free?) possible source of substrate. Jessop publish a price list printed on A2 size paper. These lists are free but, more importantly, the print does not rub off like newsprint. These lists are renewed every four to six weeks so if you talk nicely to the shop manager he will probably give you the old lists from the shop instead of binning them.

I hope the above information is of use to someone.

Regards,

Jeff Smith
Berkshire

Dear Snake Keeper Magazine,

My name is Neil Kelly and I have recently started up a slough collection. I thought this would be a good idea because in this way I would not only find out a lot more about individual snakes' lengths, widths, scale counts, etc. but I would also end up with a very interesting collection of skins.

At the moment I have around 35 sloughs. These include my own Water and Garter

Snake sloughs, Russian Amur Ratsnakes, Chinese Ratsnakes, Fox Snakes, Red Coin Ratsnakes and two Royal Pythons. My prize possession so far is an 8.5' Boa Constrictor slough.

For each slough I obtain I write an account containing the length, width, number of ventrals and the sex of each slough and also from where I obtained them. I also write down the common and Latin name of each sloughed skin. At the moment all my collection is on display on coat hangers, individually labelled.

If any readers have unwanted sloughs they do not require would they please consider sending them to me.

Neil Kelly
Cheshire.

Editor's note. If any readers have unwanted, clean and complete sloughed skins they would like to send, Neil's address can be found in the Wanted section of the Classified Advertisements. Please include details of the snake.

African Vipers of the Genus *Bitis*

by Uwe Peters

This previously unpublished article was kindly made available to us by the Editor of the West German magazine 'Das Aquarium'

Translated from the original German by John Hackworth.

For more than forty years I have kept snakes both as a hobby and professionally and during this time I have always had several representatives of the large African Vipers of the genus Bitis (Grey). My first tropical venomous snake was actually a Bitis arietans (Merrem) some 70cm long. After he had seen my careful and accident-free husbandry of various European Vipers, the grand-old-man of German herpetology, Hans Rosenberg of Hamburg, presented me with my first Puff Adder. At the outset it was quite different to care for a heavy-bodied, lethargic-looking Viper, than it was to look after the smaller, more aggressive, European species of Vipera berus, ammodytes and aspis. The apparent lethargy of the large African Vipers is very misleading and can be fatal if insufficient attention is paid to them. Bitis can attack accurately and as quick as lightning, and with their long fangs (B. gabonica up to 2cm long) can inflict enormous wounds.

For the past forty years I have kept several dozen Puff Adders varying in size from newly born of 18cm up to adults of 95cm. Bitis arietans inhabits the Savannahs and Steppes of Morocco and Western Arabia and covers the whole of Africa, with the exception of the Sahara Desert and the rain forests. The maximum length is variously quoted as 122cm or even 150cm (Visser, 1978). On average, however, Bitis arietans reaches around 80cm.



This photograph shows how B. arietans also uses its fangs to help swallow its prey.
Photo: Uwe Peters

The care of the Puff Adder is relatively

simple. For reasons of safety I decided to keep them in vivaria of 1.5 times the length of the snake in question. In this way the keeper does not have to enter the escape or biting distance of the snake. The temperature in the vivarium should be kept around 28 degrees C with a nightly cooling of around 8 to 10 degrees C. The furnishings correspond to those of a dry vivarium with a substrate of sand/peat mixture. Plants are unsuitable for such a large and heavy snake. However, to make the vivarium more attractive, a few cacti or Agaves may be installed. A large water bowl with fresh water should be available at all times. As hiding places I use pieces of cork bark and layers of flat rocks as well as hiding boxes. To inspect the snakes, the cork bark etc. can be lifted using long snake-tongs and the animals can never be injured by them. Young snakes willingly take young mice as food. My adult Puff Adders are fed on rats which they take live or dead. When feeding B. arietans, care should be taken that they are not overfed. A healthy Puff Adder is always ready to eat and has been nicknamed 'a digestive drain'. According to my experience, a rat every 14 days is sufficient for an adult Puff Adder of around 80cm long. During the sloughing period I found it expedient to spray the substrate daily with lukewarm water. It should, however, only be lightly sprayed. If they are kept under conditions which are too moist this can cause scale rot.



Bitis arietans in attack position
Photo: Uwe Peters

Kept in this way B. arietans proved to be

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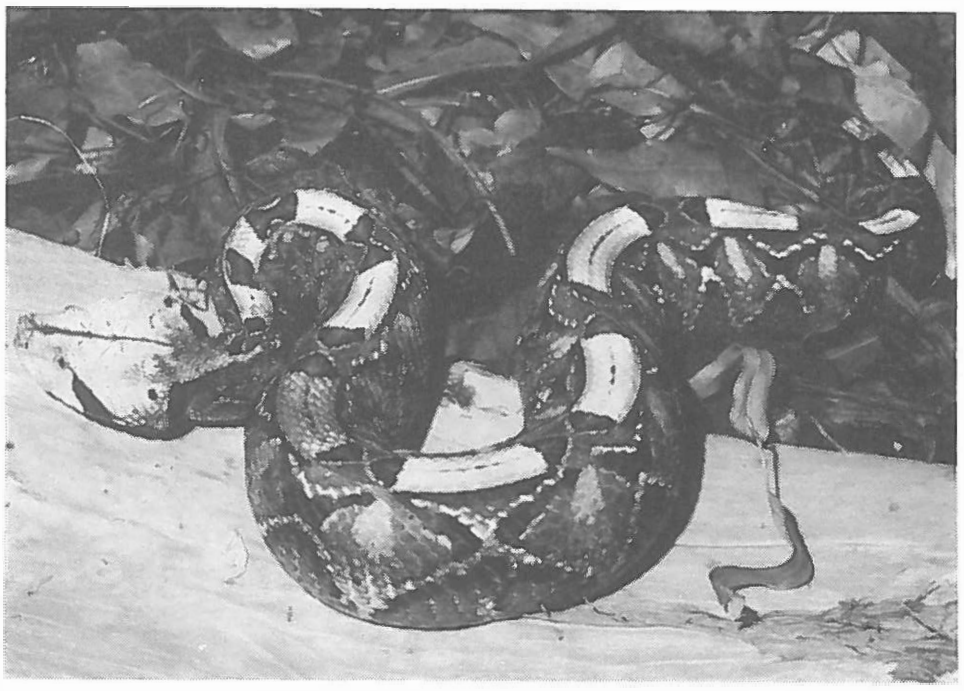
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Aquaboost	helps compensate for deficient diets and in the maintenance of optimum levels for health .	100g	£3.95
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Bitis gabonica rhinoceros in motion.
Photo: Uwe Peters

grateful and very attractive charges which lived for a number of years. Puff Adders can be found in the reptile collection of every large zoo.

Let us now consider the largest of the African Vipers, the Gaboon Viper, Bitis gabonica (Dumeril, Bibron & Dumeril). This Viper can be divided into two species, the typical B. g. gabonica with a significant subocular spot under each eye and B. g. rhinoceros which does not have the subocular spot. In the latter the 'horns' on the snout are very significantly developed. During my lifetime of work in many zoological gardens and other institutions, I have only kept the subspecies B. g. rhinoceros which hails from Africa's Gold Coast and Liberia. The husbandry of this Viper is somewhat more complicated than its relative B. arietans. Initially newly-caught and imported animals are infected with numerous parasites, e.g. lungworms. In addition they are usually weak when they arrive at their destination. The local snake-catchers in Africa do not take any great care when catching these large Vipers.

Whilst I had no luck with newly-imported Gaboon Vipers of 90 to 110cm in length, I had considerable success with young animals of this beautifully coloured Viper which had been born in captivity. Fortunately B. gabonica is regularly bred in zoological gardens. For example, here in Australia these snakes have been regularly bred at Melbourne Zoo. I have also received young captive-bred animals from San Diego Zoo (U.S.A.).

As opposed to the Puff Adder, B. gabonica and the subspecies B. g. rhinoceros are inhabitants of the rain forests. To keep these animals successfully this factor should be taken into consideration. In general, reptiles which inhabit rain forests dislike ground heating and temperatures which are too high. A comfortable temperature for them is 26 degrees C without any great variation. Large temperature and atmospheric humidity variations can have a fatal effect on the health of a Gaboon Viper.

The Gaboon Viper is much more tolerant than the Puff Adder but one should not be fooled. If they are not handled carefully they too can bite as quick as lightning. The results of a bite have been well documented in other literature. The reader can well imagine how fatal such a bite can be if the snake is two metres in length and as thick as a human thigh and with a head as large as the palm of a man's hand. Even if a bite does not inject venom, as can often happen, the fangs of this Viper (according to Trutnau, 3.5 to 5cm in length, 1982) can cause unbearable pain and inflammation.

I kept my Gaboon Vipers in vivaria similar to those described for the Puff Adder. Many authors are of the opinion that because of its lethargic behaviour the Gaboon Viper does not require a large vivarium. Regarding the animal, this may indeed be true but for reasons of safety and more aesthetic furnishing I always stick to my self-imposed rule regarding the dimensions of the vivaria. As



Bitis gabonica rhinoceros lying at rest, blending into the background.
Photo: Uwe Peters

substrate a slightly moist mixture of peat and loam should be used. Naturally a large container of water should be available at all times. Several strong, perhaps moss-covered branches and pieces of bark as hiding places complete the furnishings of the vivarium. If the vivarium is tall enough, i.e. around 150cm, several potted plants containing trailing Scindapsus and Philodendron can be installed in the upper reaches. In my experience Gaboon Vipers do not like to climb and will therefore not disturb the plants. It is however expedient to spray the plants daily. In this way drops remaining on the leaves serve to ensure the correct atmospheric humidity for the snake. Mice are the main food but, with increasing age, rats or young rabbits may be given. With healthy Gaboon Vipers the same holds good as for Puff Adders: FEED IN MODERATION.

When kept in the way described above, my Gaboon Vipers lived for number of years.

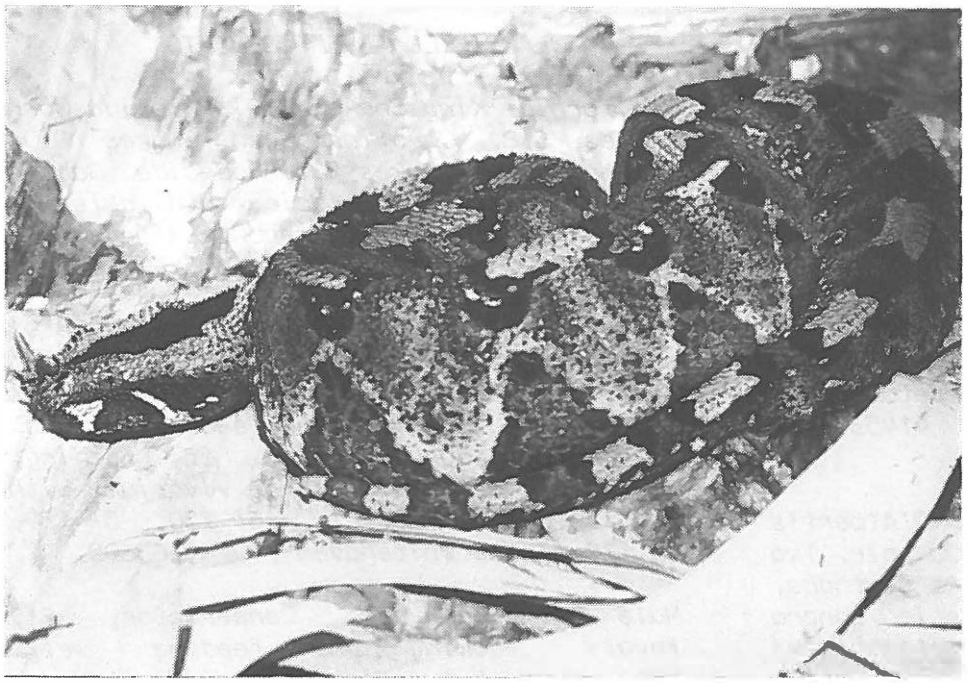
The animals which I introduced to Taronga Zoo in Sydney were captive-bred in Melbourne and San Diego and are still alive today after ten years. Amongst all the snakes exhibited in the zoo, including the large Pythons, B. g. rhinoceros is the most imposing and the snake which makes the greatest impression on visitors.

Even more imposing and more brightly coloured than the Gaboon Viper is the Nose-horned Viper, Bitis nasicornis (Shaw). To maintain this species, in general the same rules apply. However, I must agree with other writers and keepers that B. nasicornis, which reaches a length of around only 120cm, is much more belligerent and susceptible to disturbance than the other related species. In this case also, only very weak, parasite-ridden animals are usually imported from their homes in Africa. They come from Liberia, Uganda and the Southern Congo regions where they inhabit rain forests, swamps and river banks.

For its common name B. nasicornis has to thank the two to three pairs of nasal horns (scales). I can not write much about the maintenance of this attractive snake because the longest I was able to keep a specimen alive was only a little over nine months. During this time it proved to be ill-tempered and a choosy mouse-eater. Once it ate a fish which was held to its mouth using long forceps whilst it was in the process of devouring a mouse. Ostensibly, fish could form part of the natural diet of this species.

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Bitis nasicornis startled from its resting position.

Photo: Uwe Peters

Literature

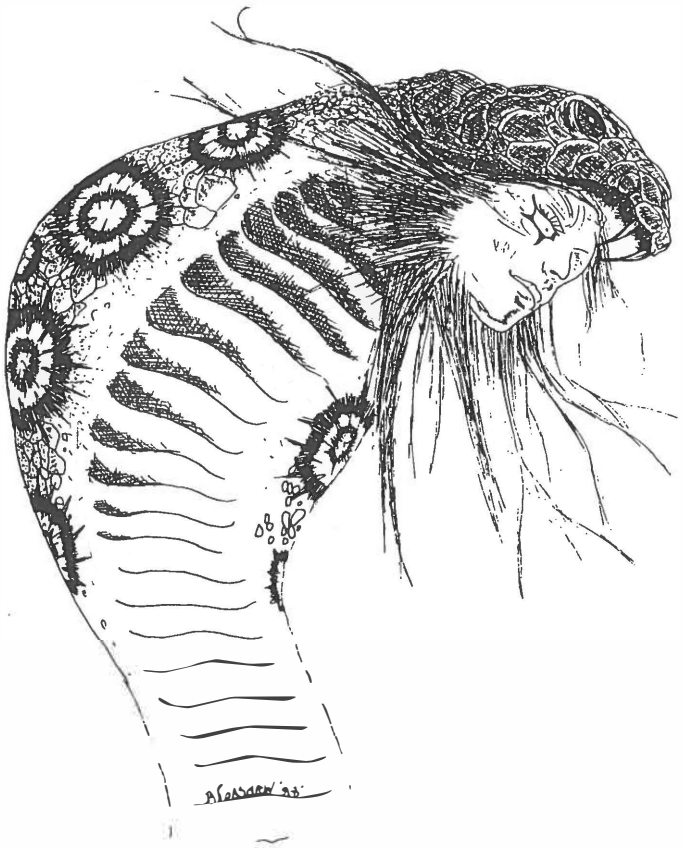
Visser, J. & Chapman, S. (1978). 'Snakes and Snakebite'. Purnell, Cape Town, Johannesburg & London.

Trutnau, L. (1982). 'Schlangen im Terrarium' (Snakes in Captivity) Volume 2: Venomous Snakes. Verlag Eugen Ulmer, Stuttgart.

Correspondence to:

Uwe Peters
P.O. Box 642
Manly
New South Wales 2095
Australia

Snake Sketch



by Bernard Forshaw

CLASSIFIED ADVERTISEMENTS

(Continued from page 20)

WANTED

Sloughed skins from Hog Island Boas for research purposes. Please send skins (including sex of snake, if known) to Colin Clark, Box No. 10, Snake Keeper Magazine, 159 Stanley Hill, Amersham, Bucks HP7 9EY.

Adult captive-bred male Corn Snake, Elaphe guttata guttata for breeding. Would like within 100 miles radius of Stevenage so that I can collect. Phone Les Carter on (0438) 354309 evenings.

Any adult specimens of the Dog-toothed Cat Snake, Boiga cynodon. Telephone (0865) 790832.

Please could any reader send unwanted sloughs to Neil Kelly, 3 Hawthorn Close, Timperley, Altrincham, Cheshire WA15 6TL or ring (061) 962 7502 and I will take down your address and send an envelope and postage. Thank you.

Rates: Private advertisements (not exceeding 40 words) are printed without charge. Trade advertisements 10p a word. Deadline 20th day of the month.

FOR SALE

Captive-bred Corn Snakes, Grey Rat Snakes and Yellow Rat Snakes. All 1988 hatchlings. £17 each. Ophidia (Herpetological Supplies). Telephone (0442) 41453 or (0865) 790832.

One unrelated pair of baby D'Albert's Pythons, Liasis albertisii, £800 pair. Two odd male hatchling D'Albert's Pythons, £350 each. Hatchling melanistic Sonora Gopher Snakes, Pituophis melanoleucus affinis, unrelated pairs, £230 pair. Albino Sonora Gopher Snake, father of the above. Serious enquiries only. Telephone (0245) 466503 after 6pm.

Viperine Snakes (Natrix maura), 1987 hatchlings, captive-bred in Holland. Superb specimens, feeding well. For sale or exchange for hatchling Black or Yellow Rat Snakes (w.h.y.?). Favourable prices for interested herpetologists. John Hackworth, 84 Mitford Gardens, High Howdon, Wallsend, North Tyneside NE28 0QR.

Bengal Monitor (Varanus bengalensis). Approximately 3', long term captive. Feeding on dead food. Excellent health and condition. Offers invited. Write to Bernard Forshaw, 629 Borough Road, Birkenhead, Wirral, Merseyside L42 9QA.

One 10' Reticulated Python, £80. One 4' Red-tailed Boa, £100. Both snakes healthy and feeding well. Telephone Ipswich (0473) 716195.

Female Royal Python, £50. Tel: (0271) 44333 (North Devon)

Boa Constrictor, 3', £95. Honduran Milk Snake, 5', £120. Pair of Corn Snakes, male 4' Carolina, female 3.5' produced 15 eggs this year, £120. Pair of California Banded King Snakes, 12" long, £50. Baby Honduran Milk Snake, £60. All healthy and feeding well. Also Adult female Red-knee Tarantula, offers invited, Telephone (0524) 64849 (Lancs)

****

Please mention Snake Keeper when replying to advertisements. Thank You.

CLASSIFIED ADVERTISEMENTS

California King Snakes £30. Florida Corn Snakes £18. Carolina Corn Snakes £20. Northern Pine Snakes £35. Red-sided Garter Snakes £7. Other species available to order. Captive-bred stock. Ring Geoff Clarke (0929) 471 851 (Dorset).

One 12' female Indian Python, £120. One 9' male common Boa Constrictor, £150. One 6' female Red-tailed Boa, £150. One Royal Python, £50. All snakes feeding well and have full documentation of feeding, sloughing etc. Also three vivariums with heaters and thermostats, 6' £30, 5' £30, 2' £10. Phone Whitehaven (0946) 63693.

Male dark-phase Boa Constrictor, 6', lovely looking and feeding well. (Reluctant but enforced sale due to Dad's clampdown on number of pets in household.) £110. Telephone Snape 8122.

Male Indian Python (Python molurus bivittatus). Tame and feeding well. Sale due to size (6'). Beautiful condition. £60. Male Tiger Rat Snake. Relatively aggressive, beautiful and feeding well. 8.5'. No blemishes. £50 or any offers. Contact Dominic on Cambridge (0223) 60541.

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Classified advertisements continue on page 19.