

THE SNAKES OF BANGKOK.

BY MALCOLM SMITH.

The following articles are the outcome of a paper which was read before the Society in June last. At that time only the common species were dealt with, but the matter has since been enlarged to include all the species at present known to have been found in Bangkok and its immediate neighbourhood.

A full technical description of each snake will not be attempted here, but sufficient will be given, it is hoped, to enable anyone to identify all the species likely to be met with. The descriptions as regards coloration apply only to those found in Bangkok, and do not necessarily hold good for the same species in other parts of Siam, although all those that I have so far been able to examine from various districts show, practically, no variation. It should be remembered however, that some snakes differ considerably in markings, especially, when they come from other countries, and to distinguish them by this means alone, cannot always be relied upon. The character and disposition of the scales upon the head and body must be taken into consideration, for they remain almost constant, and form the only trustworthy guide to identification.

The accompanying plate shows the conformation and relationship of the various scales which are used for this purpose, and at the conclusion of these articles will be found a very simple key, by which anyone can readily distinguish all the species which have been described.

In 1900 Captain Stanley Flower after spending some two years in this country, published an article* in the *Proceedings of the Zoological*

* "Notes on a Second Collection of Reptiles made in the Malay Peninsula and Siam." Only those portions dealing with Siam have been referred to in the present articles.

Society upon the reptiles of Siam. It included notes upon those he had met with himself together with a list of all the species that had been found in the country up to that date. It is needless to say that with such a valuable work to refer to, the task of drawing up the present list has been much simplified.

The number of snakes recorded by him from Siam was not great. It comprised only 56 different species, of which 26 had been met with in Bangkok. To this latter number 12 more may now be added, making a total of 38, a fair number for a tropical locality. It is interesting to compare his list made fourteen years ago with the present one, and to note how certain kinds, at that time apparently rare, have since become common. These particular ones will be referred to in due course.

Bangkok is fortunate in being peculiarly free from poisonous snakes. By the Siamese who might be expected to know something about the matter, the majority are considered poisonous. This is not so. Only four species are to be met with, and of these but two, *Naja tripudians*, the Cobra, and *Bungarus fasciatus*, the Banded Krait, need be reckoned with. The third, *Vipera russelli*, Russell's Viper, has so far only once been recorded,* while the fourth, *Lachesis gramineus*, the Green Tree Viper, although plentiful everywhere, does not possess a poison which is fatal to human beings.

Authentic records of bites from poisonous snakes in Bangkok are, in fact, if we except the last named, extremely rare, and fatal records almost unknown. In eleven years of medical practice I have not seen a single case resulting in death, neither after enquiry among my fellow practitioners have I been able to gather more than one. This immunity is possibly due to two causes, partly to the reason that the two species already mentioned are far from common, but also because both of them are well known for their marked disinclination to bite, even under provocation. In this latter respect the Banded Krait is remarkable.

The inhabitants of the country districts are not quite so fortunate as those in Bangkok, but Siam as a whole compares extremely favorably

* It is more common in the North.

in the matter of poisonous snakes with both India and Burma. If we except the sea snakes, only three other species, namely, *Naja bungarus*, the Hamadryad or King Cobra, *Ancistrodon rhodostoma* and *Ancistrodon blomhoffi*, have yet been recorded from this country, although others will no doubt be ultimately discovered.*

To attempt to attach Siamese names to the various species of snakes is a difficult task. In going through the list that I have I can find only about a dozen which may be confidently relied upon to be always given to the same snake, by those who know anything about the subject. The rest of the names are so loosely and indiscriminately applied that it is impossible to affix them to any particular species. The term งูเขียว (ngu khieo) is applied to any snake of a green color, งูดิน (ngu din) to the earth snakes, whilst งูปลา (ngu pla) includes the whole tribe of fresh water snakes. Sometimes the same name will be used for different species in different localities, or the young, if differing in color from their parents as they often do, will be looked upon as a different kind and accorded a different title. After all it is not to be wondered at. The Siamese have not yet taken up the study of Natural History, and the country people from whom the names originate, have as a rule not much interest in any creature that does not enter into their dietary.

For those who wish to take up the study of snakes more thoroughly, there are several text-books in existence, the two most valuable for this country being Boulenger's recently published volume upon the Reptiles and Batrachia of the Malay Peninsula and his older work upon the Reptiles and Batrachia of British India. These two volumes include all the known species which Siam shares with those countries.

The classification adopted in the present articles is according to the first of the two works just mentioned.

* The following poisonous species will most probably, judging from their present known distribution, be found in Siam. *Bungarus candidus*, *flaviceps*, and *multicinctus*, *Lachesis monticola* and *purpureomaculatus*, *Doliophis bivirgatus* and *intestinalis*, *Calliophis maculiceps* and *maccllellandi*. The four last, on account of the small size of the mouth, can be hardly considered dangerous to mankind.

Suborder OPHIDIA.

Family TYPHLOPIDAE.

These small worm-like snakes lead an almost entirely subterranean existence, and are therefore not often met with by the casual observer. They feed largely on worms. In general aspect many of the species bear a close resemblance to each other and cannot be identified without a close and detailed examination. There are no ventral shields as with the majority of snakes and the body is covered with smooth scales of uniform size. The tail is blunt, extremely short and it is often difficult at a glance to distinguish it from the head. The eyes are very small and covered by shields. Three species have so far been found here.

1. *Typhlops braminus*.

Siamese. งูดิน (ngu din), the term being applied indiscriminately to many of the earth snakes.

Not very common in Bangkok although it is by far the commonest and most widely distributed of all the burrowing snakes in Southern Asia. Possibly the inundations to which we are annually subject and which often last a considerable time, prevent this species from becoming more prevalent. Found in the earth of gardens, or in hiding beneath logs of wood or among heaps of old leaves. By the Siamese it is considered highly poisonous, but apart from its lacking poison glands, the mouth is so extremely small that it can hardly be capable of biting even in self defence. I have never yet known one attempt to do so. Length 175 mm. (7 inches).

Colour and markings. Black or dark brown above, lighter beneath, snout, anal region and end of tail usually whitish.

Habitat. Southern Asia and the islands of the Indian Archipelago. Also South Africa and Mexico.

2. *Typhlops schneideri*.

Habitat. Siam.

3. *Typhlops albiceps*. Both these species are extremely rare. They are recorded in Flower's list, but have not been met with since in Siam, although the latter has been found in the Larut Hills, Perak.

Habitat. Siam and Malay Peninsula.

Family BOIDAE.

4. *Python reticulatus*. The Reticulated Python.

Siamese. งูหลาม or งูเห่า (ngu lam or ngu leuam), the former name commonly used in Bangkok, the latter outside, but considerable difference of opinion prevails, and the Siamese will always affirm that they are different species. I have seen many specimens but have so far been unable to confirm this.

It is not uncommon in Bangkok, frequenting chiefly the gardens in the neighbourhood of habitations, the outhouses of which it often enters in search of food. The ease with which it can procure a meal near human dwellings no doubt attracts it there, but it is certainly remarkable that a snake which attains such large dimensions, which has such conspicuous markings and which on account of its sluggish disposition is so easily killed, should be able to survive in the very midst of a thickly populated town. Their nocturnal habits and the fact that they are very prolific no doubt account for this.

During the day they usually seek some elevated position, often lying in the most exposed situation and making little effort to conceal themselves. They are good climbers and can ascend the trunks of trees with great ease, even when there is no assistance to be obtained from branches. This they do by throwing the middle of the body into two or more loops which partly encircle the stem, and by holding on in this way they are then free to push up the fore part of the body, and take a similar purchase at a higher level. They are seldom found far from water and take to it readily to avoid capture.

Food. Small mammals and birds which they kill by constriction. Young pythons appear to consume chiefly rats, probably because they are more plentiful than other forms of food. Whether or no larger ones eat cats for the same reason I cannot say, but the number of times I have known them taken is quite out of proportion to other creatures such as fowls, ducks or dogs. In captivity my own feed largely upon rats and the way in which a coil of the body is thrown over the head of the animal so as to press the muzzle tightly into the chest, is very clever. This serves a double purpose. It aids suffocation and at the same time prevents the rat from biting its captor, but whether both are intentional I am unable

to say. No bones are broken as it is commonly believed, and the animal dies of asphyxia.

Pythons grow to a great size, like the rest of the Boa family. Specimens are said to have been killed 30 feet in length, but such dimensions are naturally never reached in Bangkok. Flower mentions one killed in 1897 that was 20 feet long. The largest I know of myself measured $16\frac{1}{2}$ feet. Specimens of 10 to 12 feet are fairly common and are often hawked in the streets where they realize a few ticals for the sake of their gall-bladder and skin. The former is accounted a valuable remedy for colic as well as for various other complaints.

A python that has newly cast its skin is one of the most handsome of snakes. No description can give any idea of the beautiful sheen and the play of metallic tints of blue and green which sparkle from every part of the body, colours which, alas, it is impossible to preserve after death.

Color and markings (in life). Above, light brown with a dorsal series of large darker colored spots, circular, oval, or rhomboidal in shape, sometimes confluent. Each one is edged with black and outside again with yellow, these two colors descending upon the sides in a regular series of V shaped marks each of which encloses a white spot. Below, whitish or yellowish, dappled with brown at the sides. A black streak along the middle of the head, and one on each side, from the eye to the corner of the mouth. *Python reticulatus* has the rostral shield and the first four upper labials deeply pitted. This will serve at once to distinguish it from the other two species of python, *P. molurus* and *P. curtus* which are found in this part of the world and have only the first two labials pitted. *P. molurus*, the common Indian python, has been recently found at Lopburi. *P. curtus* has not yet been discovered but it probably exists in the Peninsula.

Habitat. Burma and Indo-China to the Malay Peninsula and Archipelago.

Family ILYSIIDÆ.

5. *Cylindrophis rufus*.

Siamese. งูหนัง (ngu kon khop). Very common in Bangkok. Found beneath logs of wood or in heaps of earth or dead leaves, or in holes in the ground. Frequently to be met with crossing the roads

on wet nights, It has a curious habit when molested of coiling itself up with the head hidden beneath a fold of the body and the tail curled, up over its back, somewhat after the manner of a scorpion. This attitude to one who does not know it, is highly intimidating, and has given rise to its vernacular name, "ngu kon khop," the snake that bites with both ends. The tail is extremely short and blunt, and the body being of almost uniform diameter throughout, it is easy for a casual observer to mistake one end for the other. To the Malays it is known as the "ular dua kepala," the two-headed snake. It is considered highly poisonous, but is, as a matter of fact, a most inoffensive creature. I have never yet known one to bite—even when newly caught.

Food. Eels and other snakes. Its appetite is gargantuan. It seems to prefer a meal at least as large as itself, if not larger, and the manner in which it can pack its food away and appear but little bigger afterwards is extraordinary. One I had in captivity, itself 400 millimetres in length, overcame and devoured a Keel-back (*Tropidonotus piscator*) of 500 mm. (20 inches), the latter snake being well known for its activity and aggressiveness. Another was found having just swallowed a water-snake (*Homalopsis buccata*), the former 780 mm. long and the latter 925 mm. Two other specimens were caught in the water in the act of swallowing eels, their prey on each occasion being several inches longer than themselves. I could quote many other instances only a little less voracious.

In captivity it is an uninteresting creature, burrowing at once into the soil of its cage, and never re-appearing except under cover of darkness. At the same time it would appear to be by no means nocturnal in its habits, as the records of its appetite show, all of which events took place in broad daylight.

Length. Boulenger gives it up to 825 mm. The largest specimen I have seen measured 865 mm. (34 inches) in total length, the tail contributing 15 mm. only.

Colour (in life). Iridescent black to dark purple-brown, the latter colour being found only in adults. The belly is marked with a series of dull white or pinkish cross-bands, about as broad as their corresponding inter-spaces, and interrupted at the mid-line. In the young, another series of narrower bands travels upwards on to the

back, but become gradually obscured in later life, although by careful examination traces of them can usually be found. The tail has a reddish or orange mark, and there is often a collar of the same colour.

Family XENOPELTIDAE.

6. *Xenopeltis unicolor*.

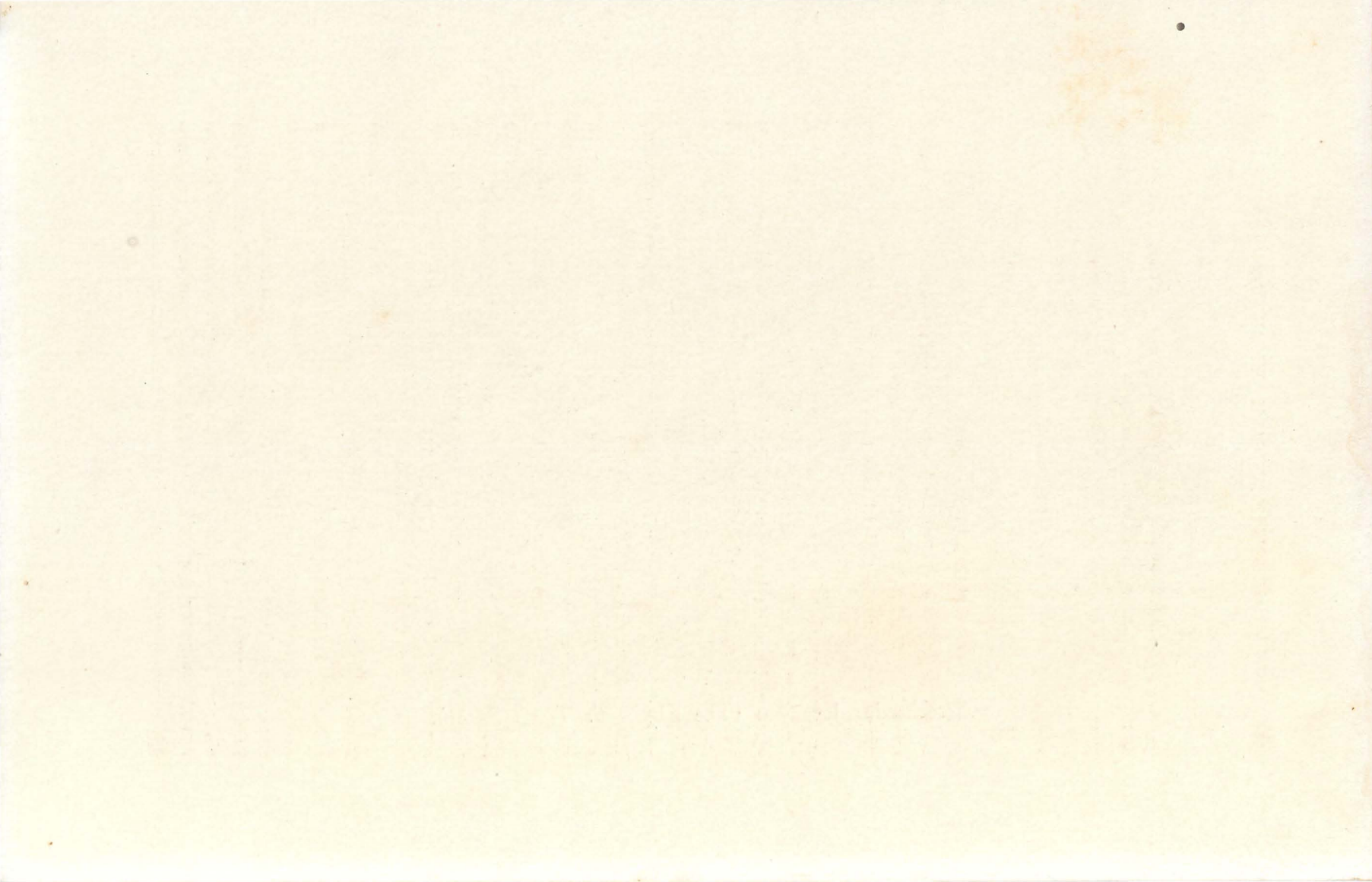
Siamese. งูแสงอาทิตย์ (ngu saang athit). The largest of all the burrowing snakes that inhabit Bangkok, where it is fairly common. It is found frequently in the saw-mills, hiding away in the stacks of wood or beneath the squares. It is found also in the gardens when turning up the ground, and beneath heaps of leaves and rubbish. In loose soil it can burrow rapidly and easily, and in captivity, like the preceding species, usually disappears immediately into the earth of its cage. It appears to be entirely nocturnal in its habits. It is an active powerful snake and when first caught, although it will make violent efforts to escape, and wrap itself round one's hand and fingers with great constricting force, does not attempt to bite. It has the curious habit when excited of vibrating the tip of its tail with great speed. The habit is by no means confined to this species, but with *X. unicolor* it is so strongly and rapidly performed that I have at times thought I could actually hear the vibrations.

The Siamese name, "ngu saang athit," the sunbeam snake, is well deserved. The high polish of every scale in its body, and the beautiful tints, chiefly of sapphire blue and emerald green, which flash forth from the upper surface (although the actual colour is uniform black or dark brown), make it a very striking creature in appearance.

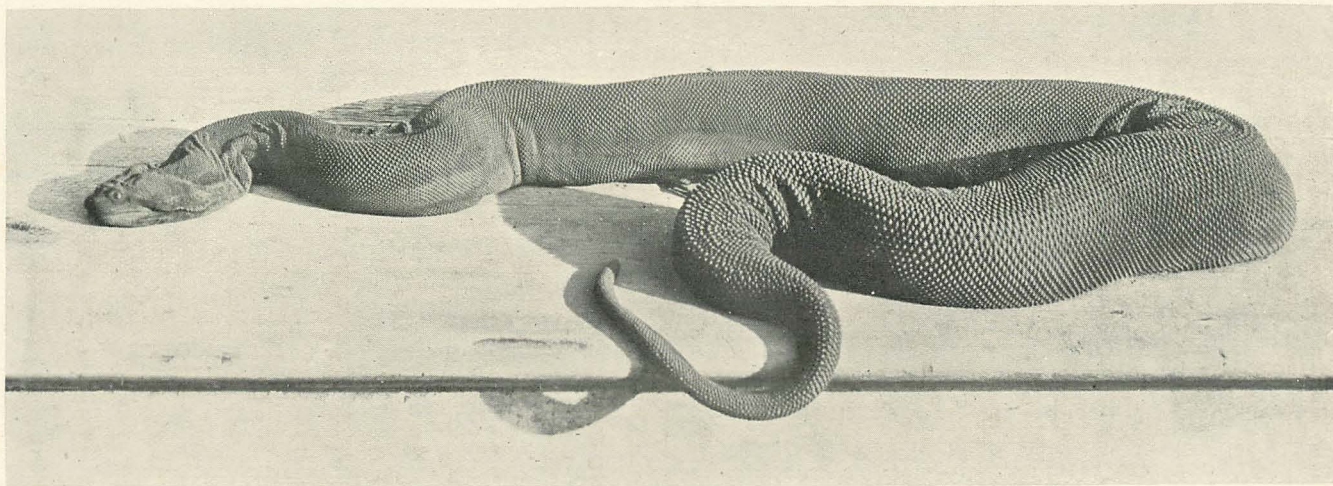
Food. Rats, mice, frogs and other snakes.

Dimensions. Grows to a length of 1200 mm. (4 ft.). The tail is very short, measuring only about one-tenth of the body length. The largest Bangkok specimen I have seen measured from snout to vent 860 mm., tail 75 mm.

Colour (in life). Above, from black or an intense bluish black to chocolate brown, uniform, the last 3 rows of costal scales being edged with white. Beneath, white, immaculate, except for the sub-caudal scales which are edged with dark grey. The young are black above with a white or yellowish collar extending on to the occiput.



Journal Nat. Hist. Soc., Siam. No. 1. Vol 1.



Acrochordus Javanicus (The Elephant's Trunk Snake).

This collar entirely disappears as the snake grows up. The change to brown takes place later in life, and is confined to adult age. Whether it occurs in all specimens I cannot say. My own experience in Bangkok is that it does so.

Family COLUBRIDAE

Subfamily ACROCHORDINAE

7. *Acrochordus javanicus*. The Elephant's Trunk Snake.

Siamese. งูน้ำจืด (ngu nguang chang). Fairly common in Bangkok, inhabiting the river and klongs. Often caught in the mud left by the receding tide. Occasionally to be found crossing a road, but on land it is quite out of its element and its movements are slow and clumsy, progressing as much like a gigantic worm as like a snake. As with many of the fresh water snakes, it has an extremely sluggish disposition, at any rate during the day time. In captivity it hardly ever moves except under cover of darkness. If handled quietly it makes no attempt to bite, but if roughly seized will turn swiftly upon one, and with its large teeth can inflict severe wounds.

Food. This consists chiefly of fish, but it is possible that this species is also vegetarian in its diet. In the stomach of one caught in Java,* a quantity of undigested fruit was found, and in one caught in Bangkok I discovered a curious conglomeration of small hard nuts, small stones, a large piece of string, as well as a quantity of fish bones. Such things could only have been swallowed accidentally, or more probably were in the stomach of some creature eaten by the snake. I am not sure that it will not eat carrion. Further observations upon its diet will be interesting.

It is a prolific snake. Cantor mentions one in his possession which brought forth 27 young ones, and two others which I examined towards the end of May contained respectively 27 and 32 well developed embryos.

Dimensions. Up to 2500 mm. (Boulenger). The largest specimen I have seen measured 1835 mm. (6 feet). For its length this snake has enormous girth, greater than that of any other snake I know. This point is well brought out in the very excellent plate, reproduced from a photograph taken while the creature was alive

* Vide Boulenger's *Reptilia and Batrachia of the Malay Peninsula*.

Color (in life). When first caught it is usually not sufficiently clean to make out any definite markings, but the actual coloration (after washing) will be found to be as follows. Above, dull brown or greyish brown, paler below, and with a line of dark, circular or or oblong blotches on either flank. These markings, the great girth, and the loose, baggy skin covered with tubercles, instead of scales, serve to distinguish this species quite easily from all others. Its title of the Elephant's Trunk Snake is a very appropriate one.

Habitat. Siam and the Malay Peninsula, Java and New Guinea.

8. *Chersydrus granulatus*. Closely allied to the preceding, but much smaller. Flower in his list mentions a specimen which was in the Museum during his time and was labelled "Bangkok." This snake is an inhabitant of river mouths and the adjacent sea-coasts. It is common at Tacheen where it is often caught with the fish at the stakes. It is not unlikely therefore that one may occasionally be carried up here by some unusually high tide or upon some fishing boat. It can, however, only be looked upon as an accidental visitor.

Subfamily COLUBRIDAE.

9. *Tropidonotus piscator*.

Siamese งูลายสับ (ngu lai saw). Very common in Bangkok, being plentiful everywhere, especially in the padi-fields during the wet weather. It is far and away the commonest snake that is met with when out snipe shooting. During the hot weather it is not much in evidence, confining itself to the banks of klongs and pools; but with the advent of the rains and consequent flooding of the fields it roams about all over the country, finding everywhere abundance of its favourite food—frogs and fish. It makes no attempt to kill its prey, but proceeds at once to swallow it alive, and the pitiful cries of the frog as it is slowly engulfed must be well known to everyone who has spent much time in the fields.* Fish it will devour with great voracity, and in the small puddles that form as the ground dries up and where the fish get herded together, it may be found making huge

* This procedure may seem extremely cruel, but, after all, Nature has not provided the snake with any other means of disposing of its prey.

meals. It is a good swimmer and is never found far away from water. It appears to be entirely diurnal in its habits.

In disposition this snake is bold and aggressive, striking and biting fiercely when molested, and with its sharp teeth being able to inflict quite severe wounds, even through gloves. In captivity, however, it quickly grows accustomed to being handled, and after a short time makes no attempt to injure one.

Length. Up to 1200 mm. (4 feet), the tail forming one third or one quarter of the whole. The largest Bangkok specimen I have seen measured, snout to vent, 960 mm., tail 240 mm.

Color and markings. In coloration this species, which is widely spread over the East, shows great variation, so much so that if they were to be judged by their markings alone, they would be frequently considered as different species. Major Wall* in an article upon this snake endeavours to arrange them into ten different varieties. Many of these however merge so gradually into each other that it is impossible to draw any definite line between them. The following description applies to Bangkok, and as far as I am aware to the rest of Siam.

Above, olive brown or green, with black spots arranged quincuncially, those upon the sides being longer than the others, forming a series of short transverse bars. The spots vary considerably in different individuals. They may be so indistinct as to be almost absent, or so large as to almost obscure the ground color, or they may be linked together forming a network. Bright scarlet markings often exist upon the sides. Beneath, whitish or yellowish, each ventral and subcaudal scale being edged with black. An oblique black streak below the eye, another behind it. A chevron-shaped mark, more or less apparent upon the neck. Interstitial skin usually arranged in black and yellow reticulations, the yellow often extending on to the adjacent scales.

Habitat. India, Burmah and S. China to the Malay Peninsula and Archipelago.

10. *Tropidonotus sub-miniatus.*

Siamese. งู คอ แดง (ngu khaw daang). Quite as common as

* *Journal, Bombay Nat. Hist. Society, Vol. XVII, No. 4.*

the preceding, but more an inhabitant of gardens and garden land. Very similar also in habits but less aggressive. This snake has to a marked extent the power of flattening its body, which it does when caught or excited in any way. It feeds chiefly upon frogs and in captivity quickly becomes tame.

Length. Up to 1000 mm.

Color (in life). Above, brown, uniform or with small black spots arranged across the vertebral line in pairs, or connected forming short cross-bars. Head, olive green, with a black streak below the eye. For about 5 centimetres upon the neck there is a patch of bright vermillion. The interstitial skin of this snake is extremely handsome, being arranged for the most part in a network pattern with the meshes alternately black and yellow. This shows up strongly when the snake expands its body. The young have an olive-grey head, with a black patch across the nape and a yellow collar behind it. Identification is easy, in life, the red colour upon the neck serving to distinguish it at once. In spirit this mark disappears very rapidly.

Habitat. Eastern Himalayas, Burma and S. China to the Malay Archipelago.

11. *Tropidonotus stolatus*.

Not previously recorded from Bangkok. Dr. Robert has a specimen which is said to have been caught here. This little snake has a wide distribution in the East and is possibly more common in the North of Siam.

12. *Lycodon aulicus*.

Not very common. Found generally in the neighbourhood of houses and often inside them, hiding itself away during the daytime in any available hole or crevice. It is a good climber and appears to prefer the roof to the floor. In disposition it is an active, excitable creature and has a most vicious temper, striking and biting freely whenever caught, but being quite unable, on account of its small size to do any damage.

Food. Chiefly geckoes, but also other species of lizards.

Length. Boulenger in his *Fauna of the Malay Peninsula* gives the total length as 510 mm. Wall states that they grow up to 750 mm. in length, but remarks that specimens over 600 mm are rare.

His measurements refer to specimens in India. The largest one that I have seen, taped 600 mm. in total length the tail forming 105 mm. This snake is very variable in its markings, but I have up to the present seen only one variety in Siam, although I have examined specimens from widely separated parts of the country—Chiengmai, Den Chai, Lopburi, Bangtaphan and Siracha. It accords precisely with Boulenger's description of the one found in the Peninsula. It would appear therefore that the variety found in this region does not grow as large as the ones found in India.

Color (in life). Above, greyish brown, with fine pale yellow (in spirits, white) reticulatus, sometimes arranged upon the back as distinct cross bars. A triangular yellowish blotch on either side of the occiput, which may be fused into a collar. Upper labials white or yellowish, each scale with a dark spot. Beneath, greyish or whitish.

Habitat. India, Ceylon, Burma and Indo-China to the Malay Archipelago.

13. *Psammophis condanarus*.

Major Wall calls it the Indo-Burmese Sand-snake* but in no way can the title be considered particularly appropriate to this locality. This handsome snake has not previously been recorded from Siam, its nearest known habitat being Pegu and Bassein in Burma. It is not common in Bangkok. At Sala Deng, on the waste land commonly known as "the Ditches," there is a small colony, and I have seen specimens from other parts of the town. My acquaintance with this snake alive is confined to the colony just mentioned, and to a certain time of the day when, after heavy rain, the sky clears for an hour or two before sunset. Then, as if seeking to dry and warm themselves, they climb to the topmost boughs of the bushes amongst which they live, and bask in the departing rays. They are very shy and unless approached with great caution dive like a flash into the undergrowth below and are lost to sight. I have only once met one on the ground. This was by the side of a Klong, in the heat of the day, and it took without hesitation to the water and escaped. When caught first

* Journal, *Bombay Nat. Hist. Society*, Vol. XX, No. 3

they bite fiercely, and although they always retain a certain amount of their shyness in captivity, do not attempt to bite afterwards. Those I have kept lived invariably upon a branch or bough placed in their cage, and seldom descended to the earth.

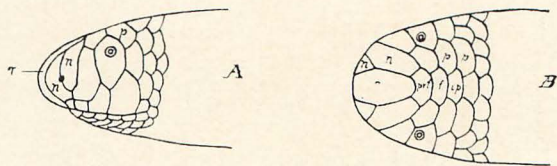
Food. Further observations on this point are wanted. Major Wall says he knew of a frog taken once, and lizards (*Mabuia*, *Calotes*) twice. I have found a small mouse in the stomach of one. At "the Ditches" lizards of any kind are seldom met with. Frogs abound, except in the driest months. The undergrowth there is extremely thick for the greater part of the year, and during the December floods the whole place is usually under water. In captivity mine refused all food.

Length. The largest specimen I have seen measured 945 mm. in total length, the tail being 225 mm.

Color (in life). Above, buff, with four well defined dark brown stripes, each $1\frac{1}{2}$ scales wide and edged with black, passing down the entire length of the body and tail. The two median lines commence at the internasal shields, the two outer pass through the eye and along the flank. In some specimens the inner margins of the median stripes become obliterated, and in a large female in my possession these bands are fused into a single broad one. Below, yellowish white, with a fine black line at the margins of the ventral shields. Upper labials, whitish. The whole snake has a fine polished appearance, and the body is particularly solid and compact. Interstitial skin in life, is never visible.

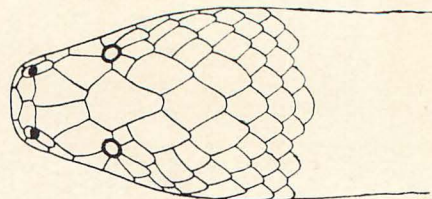
Habitat. India, Burma and Siam.

(To be continued.)

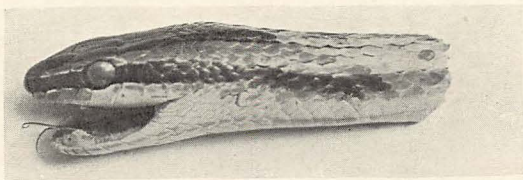


Typhlops braminus.

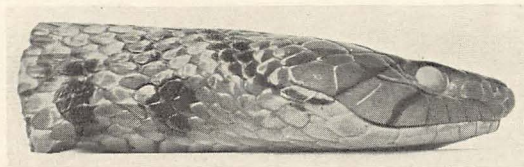
A. Side View. B. Upper Surface.



Xenopeltis unicolor.



Psammophis condanarus



Tropidonotus piscator.

