

POSSIBLE EXTERNAL DIFFERENCES OF SEX IN *PSAMMOPHIS*
SUBTAENIATUS SUDANENSIS.

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INTRODUCTION

The question of external sexual difference in snakes is a troublesome one. In most snakes sex can only be determined by the use of technical tricks like 'popping' (producing a protrusion of the hemipenes by pressing the tail base), or by probing (bringing in a probe in one of the hemipenes).

In *Psammophis* these methods are of no use. Very young males do not react to popping, and the hemipenes are so thin (about 2-3 mm diameter in full grown male) that probing would be very dangerous. External difference of sex is not known, as indicated for *Psammophis subtaeniatus sudanensis* by Pitman (1974).

From my own observations on six captive specimens of *Psammophis subtaeniatus sudanensis* I infer in this article some hypothesis concerning the external sex difference in this subspecies, and possibly in other (sub)species of this genus too. These hypothesis are intended to direct the attention of others to features they may otherwise consider irrelevant or incidental, and possibly be confirmed or rejected by their observations.

THE CHARACTERISTICS

I bought two specimens in 1983. The (later proven) male grew very fast and became very stout (length about 120 cm, diameter about 2.5 cm), whereafter his growth stopped. The female on the other hand stopped growing at a length of about 100 cm and a diameter of about 2.0 cm.

Later on I noticed the same difference in length, girth and consequently weight occur with some specimens I found at a local pet shop. Of these animals I bought the supposed female. An acquaintance bought two larger specimens, of which one appeared to be a male (he had observed protrusion of the hemipenes), and the other one behaved like a male towards the supposed female (mating behaviour?).

A supporting factor is, that in the related genus of *Malpolon*, in which until recently no external sex difference had been noted, C. de Haan, who is a *Malpolon*-specialist, says that besides other characteristics, difference in length and weight seems to be a secondary sex difference (van Woerkom, 1982).

The above mentioned facts lead to the following hypothesis:

1. In *Psammophis subtaeniatus sudanensis* (and possibly also in other (sub)species of this genus) the mature male is larger than the mature female; the average length of the mature male of this species is about 120 cm or somewhat more, that of the mature female about 100 cm or a little more.

My second hypothesis is as follows:

2. With mature male *Psammophis subtaeniatus sudanensis* the head is more 'blunt' than that of the female with the males having a sort of bump on the front of the head (see figure 1).

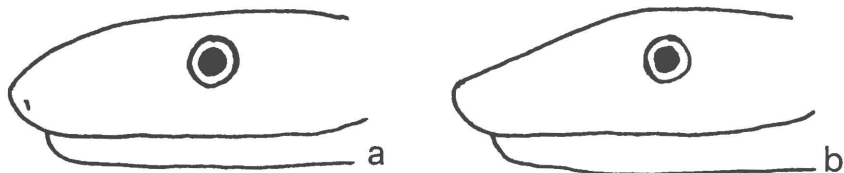


Fig. 1. *Psammophis subtaeniatus sudanensis*.
a. male (?); b. female (?).

If this hypothesis is true, and if it would also be true for other species of this genus, the head form as given by Pitman (1974) as typical for *Psammophis sibilans* (equal to figure 1a) would be based on observations on male specimens.

SOME NOTES

Finally I present some additional notes to my former article (Steehouder, 1984).

The young of *Psammophis subtaeniatus sudanensis* are very small and always refuse pinky mice, while readily accepting young lizards and small frogs. After some months of force feeding (mouse-tails, small strips of heart with multi-vitamins) most of them will accept small pieces of pinky mice, which are offered on a small dish. Fairly soon thereafter they accept dead, slightly cut pinkies, and later on live pinkies, which are caught, killed and eaten in the same way the parents do: seized by the neck, chewed to introduce venom, released when dead, the surroundings are investigated, then the prey is swallowed when everything is safe. Food acceptance and growth-rate are very good when they have started to eat pinkies, only decreasing when night temperatures become low. When the night temperature drops below about 11°C, the juveniles turn to a kind of semi-hibernation, not warming up

during the day. At night temperatures of about 16-17°C they behave normal.

REFERENCES

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