

THE SNAKES OF SURINAM, PART XVI: SUBFAMILY XENO-
DONTINAE (GENERA WAGLEROPHIS, XENODON AND XENO-
PHOLIS).

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THE GENUS *WAGLEROPHIS* ROMANO & HOGE, 1972

This genus contains only one species. Prior to 1972 this species was known as *Xenodon merremii* (Wagler, 1824). This species is found in Surinam.

General data for the genus:

Head: The head is short and slightly flattened.

The strong neck is only marginally narrower than the head. The relatively large eyes have round pupils.

Body: Short and stout with smooth scales. The scales have one apical groove. The formation of the dorsal scales is characteristic for this genus. These are arranged so that the upper rows are at an angle to the lower ones (see figure 1) .

Tail: Short.

Behaviour: Terrestrial and both nocturnal and diurnal.

Food: Frogs, toads, lizards and sometimes snakes, insects or small mammals.

Habitat: Damp forest floors near swamps or water.

Reproduction: Oviparous.

Remarks: When threatened or disturbed, the fore part of the body is inflated and the neck is spread in a cobra-like fashion. The head is also raised slightly, but not as high and as

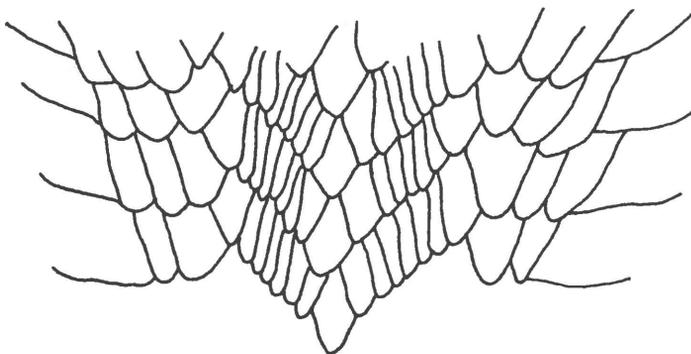


Fig. 1. Dorsal scale pattern of *Waglerophis*.
From: Peters & Orejas-Miranda, 1970.

vertically as a cobra. This is an aggressive snake which will invariably resort to biting if the warning behaviour described above is not heeded.

This genus (in common with the genera *Xenodon*, *Heterodon* and *Lystrophis*) has two enlarged teeth attached to the back of the upper jaw. These teeth, along with the rest of the upper jaw, are folded in a horizontal position when the mouth is closed. When the mouth is opened wide to engulf prey, the enlarged teeth (and the entire upper jaw) are swung into a vertical position and are then able to function. The other teeth in the upper jaw then lose their function entirely (see figure 2).

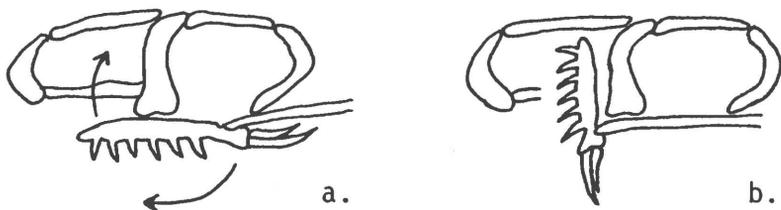


Fig. 2. Position of upper jaw with mouth closed (a) and opened (b).

The enlarged teeth described above are mostly used for puncturing toads and frogs which inflate themselves as a defence. These amphibians, once deflated are then easier to engulf. To accomplish this, the snake first turns its prey upside-down in order to puncture its belly with these teeth.

Waglerophis merremii (Wagler, 1824)

Dutch name: Bosslang or Kikvorsslang.

Surinam name: Todo sneki.

Maximum length: Approximately 1.20 m.

Scalation: Dorsals in 19 rows (smooth scales + 1 apical); 141-145 ventrals; 38-41 subcaudals; anal scale divided or single; 1 preocular; 3 postoculars; 1 loreal; 7 or 8 upper labials; 10 or 11 lower labials; 1+2 temporals.

Teeth: There are two enlarged teeth in the rear of the upper jaw which fold against the roof of the mouth. A large diastema separates them from the other teeth. In total there are 8 or 9 teeth in the upper jaw.

Colouration: This species is encountered in a wide variety of colours and patterns (see Amaral, 1978).

The most common form is one with dark saddle - or butterfly-shaped blotches, whose colour varies from dark brown to dark grey-brown or dark olive-green. The diamond-shaped spaces between these blotches, have respectively the same colour as the blotches in the centre, but become lighter towards the edges forming beige-coloured outlines. The belly varies from grey to off-white

The pattern and colours of the above described phases strongly resemble those of *Bothrops alternatus*. In consequence, *Waglerophis merremii* is often confused with this deadly lance-head

in the regions where both species occur. Another form, much less often seen, is yellow-brown with poorly defined red-brown blotches. Its belly is yellow. Other colour phases are uniformly dark.

Remarks: Colour photographs of a dark brown and a yellow specimen can be found on pages 159 and 162 in "Snakes of South America" by Dr. Marcos Freiberg. A photograph of a dark olive-green specimen can be found on page 86 of "Schlangen I" by Ludwig Trutnau.

Distribution: The Guianas, Brazil, Bolivia, Paraguay and north and central Argentina.

Locality records in Surinam: The writer has not yet found an example of this species in Surinam.

THE GENUS *XENODON* BOIE, 1927

This genus is comprised of seven species of which one has two subspecies. Three species occur in Surinam.

General data for the genus:

Head: As for the genus *Waglerophis*

Body: As for the genus *Waglerophis*

Tail: As for the genus *Waglerophis*

Behaviour: As for the genus *Waglerophis*

Food: As for the genus *Waglerophis*

Habitat: Primarily rain and savannah forests. One species also occurs along the borders of these areas, but only near water or swampy areas.

Reproduction:Oviparous.

Remarks: See the genus *Waglerophis*.

Xenodon rabdocephalus rabdocephalus (Wied, 1824)

English name: False Fer-de-lance or Frog-eating snake.

Dutch name: Moeras kikvorslang.

Surinam name: Todo sneki.

Maximum length: Approximately 1.20 m.

Scalation: Dorsals in 19 rows (smooth scales + 1 apical); 124-156 ventrals; 35-52 subcaudals (paired); anal scale single; 1 preocular; 2 or 3 postoculars; 1 loreal; 8 upper labials (4th and 5th touch the eye); 10 (sometimes 9 or 11) lower labials; 1+2 (sometimes 1+3) temporals.

Teeth: Possesses the large maxillary teeth described under the genus *Waglerophis*. However, the total number of teeth in the upper jaw is 15 to 19, compared with 8 or 9 in *Waglerophis*.

Colouration: This species is also found in a wide variety of colours.

Most specimens have red-brown to grey-black saddles separated by spaces of roughly equal size but of a lighter colour. The edges of these saddles are normally darker (dark brown to black). There may also be thin beige bands present between the saddles. Sometimes specimens which completely lack saddles still have these beige bands over the entire length of their bodies.

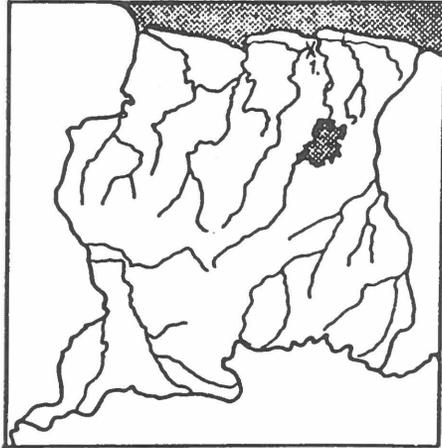
The above described patterns and colourations often strongly resemble those of *Bothrops atrox*, the very dangerous Pit viper known in Surinam by the name of Owroe-koekoe (Fer-de-lance in English).

Furthermore, there are also entirely dark colour phases. Once the writer received a specimen from Mr. K. van Deursen which was completely black with an off-white belly. The snake was about 50 cm long and its scalation was as follows: 19 dorsal rows, 146 ventrals, 32 subcaudals, a single anal scale, 1 preocular, 2 postoculars, 1 loreal, 8 upper labials, 10 lower labials, 1+2 temporals and about 17 maxillary teeth.

Remarks: It is often impossible to tell the difference between *Waglerophis merremi* and *Xenodon rabdocephalus rabdocephalus* by colour and pattern alone. The only sure way to tell them apart is by counting the number of teeth in the upper jaw (maxillary). *Waglerophis merremi* has only 8 or 9 of them while *Xenodon rabdocephalus rabdocephalus* has more than 15.

Distribution: From Nicaragua down to Colombia, Ecuador, Brazil, Bolivia and the Guianas.

Locality records in Surinam: 1. The Boma polder near Paramaribo.



Xenodon severus (Linnaeus, 1758)

English name: Frog snake.

Dutch name: Savanne kikvorsslang.

Surinam name: Todo sneki.

Maximum length: Approximately 1.60 m.

Scalation: Dorsals in 21 rows (smooth scales + 2 apicals); 130-142 ventrals; 32-41 subcaudals (paired); anal scale divided; 1 preocular; 2 postoculars; 1 loreal; 8 upper labials (4th and 5th touch the eye); 11 (sometimes 10) lower labials; 1+2 temporals.

Teeth: Dentition similar to that of *Waglerophis merremi*, but there are 12 to 14 teeth in the maxillary (upper) jaw.

Colouration: This species also exhibits a wide variety of colours and patterns; yellow-brown with irregular large black blotches, black with irregular yellow-brown blotches, black with irregular yellow-brown spots, completely black or completely greenish-yellow. Of two adult specimens which the writer had obtained at the same time, one had a yellow ground colour and the other black. The first one also had a black rim around each scale, although the head was light brown. This specimen gave the appearance of being greenish-yellow.

The other specimen's scales were mostly black with a small amount of yellow at the base, while its head was brownish olive-green. This specimen's appearance was that of being more olive-green. Both specimens had a yellowish belly. Two juveniles born during different periods had roughly the same colours and patterns. These were made up of broad dark brown saddles on a beige ground colour. Also, each had a horseshoe-shaped mark near the back of its head, while a cross-bar ran between the eyes over the top of the head.

A rather striking characteristic was a black and white checker board pattern which ran along the entire edge of the belly, while the belly itself was coloured grey.

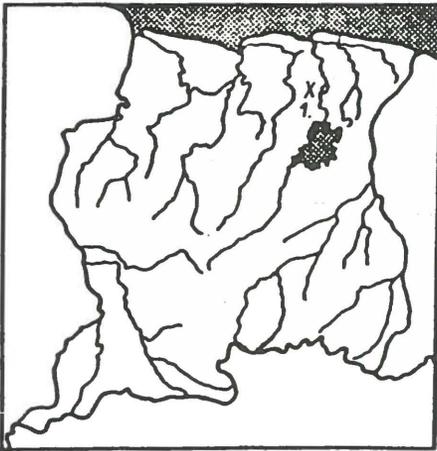
Remarks: The above described specimens were found in border areas between savannah forest and savannah. During the rainy season it becomes very damp and many species of frogs and toads are found there.

Distribution: The Amazon Basin.

Locality records in Surinam: 1. The area around Bosbivak Zanderij.



Fig. 1. *Xenodon rabdocephalus*. Foto: A. Abuys.



Distribution of
Xenodon severus.

Xenodon werneri (Eiselt, 1963)

Dutch name: Groene kikvorsslang.

Maximum length: Approximately 1.10 m.

Scalation: Dorsals in 19 rows (smooth scales + 1 apical); 132-145 ventrals; 37-40 (?) subcaudals;

Anal scale single; 2 preoculars; 2 postoculars; 1 loreal; 8 (sometimes 9) upper labials; 9 (sometimes 10) lower labials; 1+3 temporals.

Teeth: Dentition similar to that of *Waglerophis merremii*, but the total number of maxillary teeth is more than 12.

Colouration: This species is characterized by an overall light green colour. Each green scale has a black edge.

A pattern of black spots on the top of the head produces curious worm-like patterns. The belly is yellow.

Remarks: This species has a very characteristic colour in comparison to the other species.

Distribution: Brazil, French Guiana and Surinam.

Locality records in Surinam: The author has not yet found an example of this species in Surinam.

THE GENUS *XENOPHOLIS* PETERS, 1869

This genus comprises only two species of which only one is found in Surinam.

General data for the genus:

Head: The head is not very much wider than the neck. These snakes have small eyes with round pupils. A characteristic of this genus is the fact that the two prefrontals have fused together to form a single plate.

Body: Small and slender with smooth scales.

Tail: Short.

Behaviour: A truly terrestrial genus.

Food: Mostly small frogs.

Habitat: The damp forest floors of rain forests.

Reproduction: Unknown.

Remarks: Very little is known of this genus.

Xenopholis scalaris (Wucherer, 1861)

Dutch name: Kleine ladderslang.

Maximum length: Approximately 40 cm.

Scalation: Dorsals in 17 rows (smooth scales); 129 -144 ventrals; 32-38 subcaudals; anal scale single; 1 preocular; 2 postoculars; 1 loreal; 8 upperlabials (4th and 5th touch the eye); 9 lower labials; 1+2 temporals; the prefrontals are fused together to form a single prefrontal plate.

Teeth: In total there are 16-17 maxillary teeth of which the last two are enlarged, grooved and separated from the others by a diastema.

Colouration: The ground-colour is grey-brown and there is a dark vertebral stripe running down from the neck to the tip of the tail. A pattern of short black cross-bands or elongate rectangular spots run down the entire length of the body on both sides of the vertebral stripe.

These half-bands are placed alternately on each side of the stripe, while a few meet each other and pair up to become a full band or touch each other's edges.

The brown scales between these bands each have a black edge. The belly is cream coloured.

Remarks: The pattern and colouration of this species very much resemble that of *Atractus schach* (see Abuys, 1983, figure 1)

Distribution: Brazil, Ecuador, Peru, Bolivia and the Guianas.

Locality records in Surinam: The writer has not yet found an example of this species in Surinam.



Fig. 2. *Xenodon severus*. Foto: A. Abuys.



Fig. 3. *Xenodon severus*, juv. Foto: A. Abuys.

REFERENCES

- Abuys, A., 1983. De slangen van Suriname, deel VI: Subfamilie *Xenodontinae* (algemeen en genus *Atractus*). Litt. Serp., Vol. 3 (2/3): 72-88 / Eng. ed.: 66-81.
- Amaral, Afrânio do, 1978. Serpentes do Brasil, Iconografia Colorida -- Brazilian Snakes: a Color Iconography. 2nd Ed. Universidade de São Paulo. Pp. 1-246.
- Freiberg, Marcos A., 1982. Snakes of South America. T.F.H. Publications Inc., No. PS-758. Pp. 1-189.
- Peters, James A. & Braulio Orejas-Miranda, 1970. Catalogue of the Neotropical Squamata, Part I. Snakes. Smithsonian Inst. Bull., No. 297: i-viii, 1-347.
- Trutnau, Ludwig, 1979. Schlangen im Terrarium I: Ungiftige Schlangen. Verlag Eugen Ulmer, Stuttgart. Pp. 1-200.