THE SNAKES OF SURINAM, PART XI: SUBFAMILY *XENODONTINAE* (GENERA *NINIA*, *OXYBELIS*, AND *OXYRHOPUS*).

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Contents: The genus *Ninia* - The genus *Oxybelis* - The genus *Oxyrhopus* - References.

THE GENUS *NINIA* BAIRD & GIRARD, 1853

This genus includes eight species, of which one species occurs in Surinam.

General data and features of the genus:
Head: The head merges gradually into the neck. The eyes are small with vertical oval pupils.
Body: The body is slightly flattened dorso-ventrally. Generally these snakes have keeled scales and are of small size.
Tail: No specific details.
Behaviour: These snakes are terrestrial and nocturnal.
Food: They feed on insects and other arthropods.
Habitat: Bushy areas (rainforests) where they find shelter under leaf litter, rocks or fallen tree trunks.
Breeding: No information.
Specific details: In case of danger these snakes flatten and broaden their bodies. These snakes are not aggressive.

Ninia hudsoni Parker, 1940

This is the only species of *Ninia* recorded in Surinam.

Distribution: The Amazon area of Ecuador and New

River (this is the southwest part of Surinam next to Guyana).
Locality records in Surinam: This snake has not been found by me in Surinam.

THE GENUS *OXYBELIS* WAGLER, 1830

This genus includes four species, of which three occur in Surinam.

General data and features of the genus:
Head: The head is oblong and spear-shaped with a clear separation between head and neck. The bulging eyes have round pupils.
Body: The body is slender or very slender, and is flattened dorso-ventrally. The scales are smooth.
Tail: The tail is long, thin and whip-like.
Behaviour: These are arboreal snakes which hunt mainly by day.
Food: Their food mainly consists of lizards, tree frogs and (nestling) birds. The largest species *Oxybelis fulgidus* also preys on small birds and small arboreal mammal species.
Habitat: *Oxybelis* occurs in rain forests (high forest) and savannah forests. The lands bordering swamps, savannah and cultivated plantations form the main hunting grounds for this genus of snakes.
Breeding: They are oviparous, laying a maximum of approximately ten eggs.
Specific details: These snakes are not aggressive, with the exception of the species *Oxybelis fulgidus*, although they sometimes adopt a threat posture with the mouth wide open. When they are held they produce an unpleasant-smelling secretion.
Snakes of this genus have extremely good powers of observation: Firstly, the pointed nose and grooves in front of the eyes enable the snake



Fig. 1. *Oxybelis aeneus*. Foto: A. Abuys.

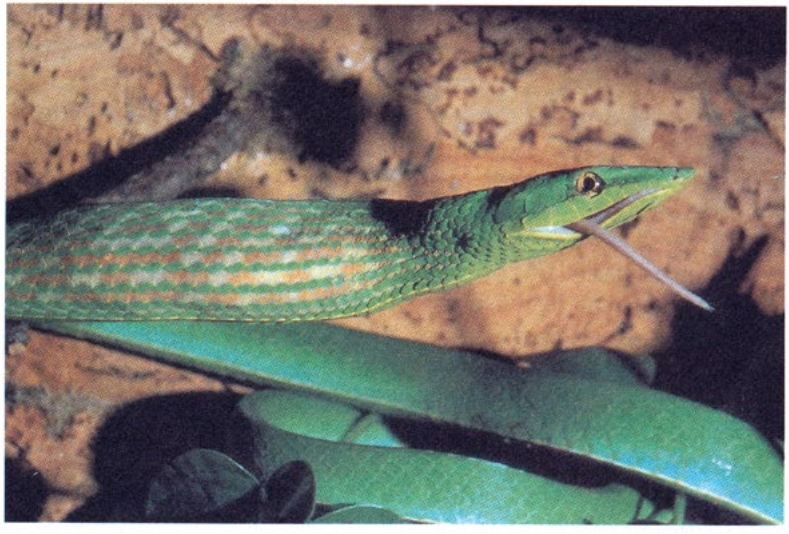


Fig. 2. *Oxybelis fulgidus*. Foto: A. Abuys.

to clearly see objects directly in front of it. Additionally, these snakes are able to rotate the eye in the socket in such a way that they can direct the pupil slightly upwards or alternatively completely downwards. Therefore, even when the head is held horizontally, the snake is still able to look upwards or directly downwards. These adaptations assist the snakes greatly in their arboreal search for prey. *Oxybelis spp.* have enlarged, deeply grooved fangs placed towards the rear of the upper jaw. The grooves are connected to the poison glands. According to Mole (1924) and Rabb (1972) snakes of the genus *Oxybelis* use their tongues to lure prey. The tongues are apparently mistaken for insect larvae, particularly by frogs and lizards.

Oxybelis aeneus (Wagler, 1830)

Dutch name: Bruine spitsneusslang.
English name: Ashy Tree Snake, Whip snake, Lizard snake, or Horsewhip-snake.
Surinam name: Swipi.
Maximum length: About 180 cm.
Scalation: Dorsals in 17 rows of smooth scales; 188-200 ventrals; 163-190 subcaudals; anal scale divided; 1 preocular; 2 (sometimes 3) postoculars; loreal absent; 9 supralabials, the 4th, 5th and 6th touching the eye; 9 (sometimes 10) sublabials; 1+2 very large temporals.
Teeth: There is no extra gap between the ordinary teeth and the two or three grooved fangs at the rear end of the upper jaw.
Features: A thin black line runs from the nose, just above the supra labials right across the eye to the back of the head. This black line forms a sharp separation between the mid-brown colour of the top of the head and the white of

the underside. From the neck downwards the dorsal surface is light grey-brown with small brown or black spots, spread over the entire length of the snake. The chin and throad are white. The rest of the underside is a marbled light brown.

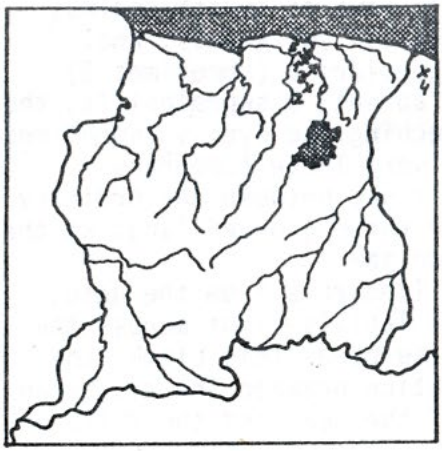
When threatened, this snake stiffens the entire body and protrudes the tongue. This posture gives the snake the appearance of a thin branch or liana, and provides effective camouflage.

Remarks: This species often lives in close proximity to human habitation. I regularly came across this snake in the gardens close to the city.

With some care and devotion this snake can be kept successfully in a terrarium. Kho (1975) mentions in an article on the captive husbandry of *Oxybelis aeneus* that these snakes can be kept alive with fish.

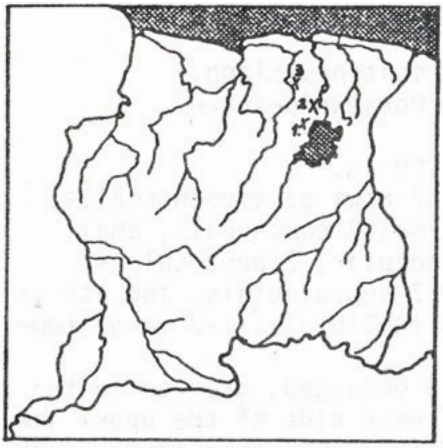
Distribution: From south Arizona and Mexico to the northern half of South America.

Locality records in Surinam: 1. Surroundings of Paramaribo (for example in the Kultuurtuin); 2. Surroundings of the bushcamp Bosbivak at Zanderij; 3. Onverdacht; 4. Mana; 5. Boma polder.



Oxybelis argenteus (Daudin, 1803)

Dutch name: Gestreepte spitsneusslang.
English name: Lineated Horsewhip-snake.
Surinam name: Swipi.
Maximum length: About 180 cm.
Scalation: Dorsals in 17 rows of smooth scales; 194-214 ventrals; 178-197 subcaudals; anal scale divided; 1 preocular; 2 postoculars; loreal absent; 6 or 7 supralabials, the 4th is touching the eye; 6 sublabials; 1+2 large temporals.
Teeth: There are 2 or 3 enlarged, grooved teeth towards the rear of each side of the upper jaw. These are separated from the other teeth on the jaw by a noticeable gap.
Features: The basic colour of the dorsal surface is beige to light brown. The head colour is a light olive brown. This colour continues as an olive brown stripe which runs the length of the vertebral line. Over the side of the head there is an irregular, broad, olive brown stripe. This stripe runs from the nasal scale through the eye after which it narrows to a thin line that continues as a lateral stripe down the body. The throat is light green. This colour continues as three light green coloured stripes along the ventral surface, which has a white ground colour. The middle of these three light green stripes is thinnest, only a quarter of the thickness of the other two.
Remark: I came across this snake much less frequently and mainly in inland areas, away from hibitation.
Distribution: The lowlands of the northern part of South America, but only east of the Andes.
Locality records in Surinam: 1. Brownsberg; 2. Berg en Dal; 3. O.P. savannah.



Oxybelis argenteus

Oxybelis fulgidus (Daudin, 1803)

Dutch name: Groene spitsneusslang.
English name: Green Horsewhip-snake; Green Whip Snake; Emerald Tree Snake.
Surinam name: Boesi swipi; Tetê-sneki.
Maximum length: About 220 cm.
Scalation: Dorsals in 17 rows of smooth scales; 197-240 ventrals; 143-156 subcaudals; anal scale divided, 1 preocular; 2 postoculars (sometimes 1); loreal absent; 9 or 10 supralabials, the 5th, 6th and 7th touching the eye; 10 sublabials; 1+2 large temporals.
Teeth: In the upper jaw there are 3 sometimes 4 enlarged and grooved teeth towards the rear of each side of the jaw. There is no gap between these enlarged teeth and those teeth preceeding them.
Features: A remarkable feature is the pointed upper jaw protrudes far beyond the lower jaw. The top of the head and the entire dorsal surface of the body is leaf-green coloured, whilst the belly is yellow-green or light green. Laterally the body is separated from the belly



Fig. 3. *Oxybelis argenteus*. Foto: A. Abuys.



Fig. 4. *Oxybelis argenteus*. Foto: A. Abuys.

by a thin white stripe.
In case of danger or treat this species will inflate its neck displaying the orange colour of the skin between the scales. This gives a remarkable colour-effect which is intended to frighten enemies.
During the swallowing of large prey the same effect can be seen.

Remarks: Prey is caught in the mouth and moved into contact with the fangs at the rear of the mouth. A mouse dies within one minute of coming into contact with the venom of this species.
Some measurements and weights:

Length (cm)		Weight (g)
160	-	89
161	-	136
160	-	142
206	-	194
210	-	224

This is a larger species than the others in this genus. In captivity it can be kept well in a jungle-like terrarium and will feed on mice.

Distribution: Middle America and tropical South America east of the Andes.

Locality records in Surinam: 1. Surroundings of the bushcamp Bosbivak at Zanderij; 2. Moses creek (along the Avanaveroroad).



THE GENUS *OXYRHOPUS* WAGLER, 1830

This genus contains a total of eleven species, three of which have recognised subspecies. Two species occur in Surinam.

General features and data of the genus:
Head: The head is oval-shaped and streamlined, and merges gradually into the neck. The eyes have vertical oval pupils.
Body: The body is flattened somewhat side-ways. The snakes are smooth scaled. Generally specimens of this genus are not of large size.
Tail: No specific details.
Behaviour: This snake is terrestrial and diurnal.
Food: The food mainly consists of small mammals, however, lizards and small snakes are also taken.
Habitat: Rainforests, savannah forests and their border areas.
Breeding: These snakes are oviparous.
Specific details: These snakes possess two enlarged grooved fangs at the rear end of each side of the upper jaw. They are separated from the rest of the teeth by a diastema. Members of this genus are not normally aggressive.
Remark: The variety in the colour pattern within individual species makes it difficult to recognize the several species by colour alone. Distinguishing between the Surinamese species is possible by determining whether the preoculars are in contact with the frontals.

Oxyrhopus formosus (Wied, 1820)

Dutch name: Zwartgebande rode bosslang.
Maximum length: About 100 cm.
Scalation: Dorsals in 19 rows of smooth scales (each with 2 apical pits); 176-206 ventrals; 64-78 subcaudals; anal scale: single; 1 loreal;

8 supralabials (the 4th and 5th touching the eye); 9 sublabials; 1 preocular; 2 postoculars; 2+3 temporals; the preocular does not touch the frontal.

Features: A pair from French Guyana had their snouts yellow coloured from the frontals forwards. The basic colour of their dorsal surface was brick-red. The tail was yellow and red banded, the belly yellowish. The male had indistinct black cross-bands over the red basic colour of the body.
The specimens from the Amazon-area have an orange-red head and neck. The upperbody is black and red banded, the red bands being broader than the black ones. The red bands, especially towards the distal area of the body, broaden at the belly edge. The black bands narrow at the belly edge to half their width on the dorsum, and run diagonally over the belly, creating complete rings. At midbody the red scales each possess a black spot.

Distribution: The bushy South America, north of the 20th degree of latitude.

Locality records in Surinam: This species has not yet been found by me in Surinam.

Oxyrhopus petola petola (Linnaeus, 1758)

Dutch name: Roodgebande zwarte bosslang.

English name: Narrow-banded false coral snake.

Maximum length: About 110 cm.

Scalation: 19 rows of smooth dorsal scales, each with 2 apical pits; 180-222 ventrals; 78-126 subcaudals; anal scale single; 1 loreal; 8 supralabials, the 4th and 5th touching the eye; 10 (sometimes 9) sublabials; 1 preocular; 2 postoculars; 2+3 (sometimes 2+2) temporals; the preoculars are touching the frontal at one point.

Features: Most of the specimens which I caught or examined had the following colour pattern: The basic colour was mainly black or black with a purplish sheen. Over the whole dorsum from neck to tail tip are narrow red cross-bands. These run precisely to the belly-edge. Not all the bands form perfect half rings - some are joined in the middle of the back, others are just touching each other on the flanks, and the remainder are discreet bands. The average of the number of bands is 45. The belly is white or yellow coloured.

In one specimen I saw the first four bands were white, the remainder red. Another specimen had alternate red and white bands. Another specimen was totally purple-black coloured. The bands vary considerably in width.

Beebe (1946) gives a description of an *Oxyrhopus petola petola* from British Guyana with a pattern of purple and white bands; the purple bands themselves appeared to be bordered by thinner white coloured bands.

Most of the specimens that I obtained were caught in the gardens in the middle of the city Paramaribo. Two specimens came out of my own garden: I caught the first one myself and the second was caught by my wife, who pulled the specimen out of a mouse-cage! Obviously the snake had crawled through the wire into the cage but could not escape after it had swallowed the mouse.

In my opinion it can be stated that *Oxyrhopus* is often found living in inhabited areas. This species hunts small mammals and their young, but also takes the lizard species *Ameiva ameiva* which often occurs in gardens.

They are calm and unaggressive little snakes. Unfortunately I never kept this snake in a terrarium so I can not state how easily this snake can be kept in captivity.

Distribution: The Amazon regions of Colombia, Brazil, the Guyanas and Trinidad.

Locality records in Surinam: 1. Paramaribo; 2. The road to Goliathberg; 3. Bernhard village; 4. Nickerie.



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Fig. 5. *Oxyrhopus petola petola*. Foto: A. Abuys.