

STUDIES ON THE FAUNA OF CURAÇAO AND OTHER
CARIBBEAN ISLANDS: No. 37.

SOME SNAKES FROM THE LESSER ANTILLES

by

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with Plates IV-V

In a previous paper, published in the same series, Vol. 2 (1940), the author dealt with a small collection of snakes obtained by Dr. P. WAGENAAR HUMMELINCK in 1930 and 1936 on the islands off the Venezuelan coast and on the adjacent mainland. The present article reports on some specimens, chiefly from the Dutch islands of the Windward Group, presented by him to the Rijksmuseum van Natuurlijke Historie at Leiden in later years. Some notes are included on three specimens of *Alsophis* from the same area that were already present in the collections of this museum (indicated by M.L.). — The photographs were made by Dr. HUMMELINCK.

TABLE 12.

Distribution of Snakes in the Netherlands Antilles

Species:	Aruba	Curaçao	Bonaire	St. Eustatus	Saba	St. Martin	treated in <i>Studies Fauna Curaçao</i> volumes:
<i>Liotyphlops albivrostris</i>		×					2, p. 116–117; 9, p. 51.
<i>Leptotyphlops albijrons</i>			×				1, p. 114, pl. XIII; 2, p. 117; 9, p. 52.
<i>Alsophis rijgersmai</i>						×	9, p. 52–54, pl. IVa.
<i>Alsophis rufiventris</i>				×	×		9, p. 55–58, pl. Va, IVb.
<i>Leimadophis triscalis</i>		×					1, p. 114; 2, p. 124–125, 127, pl. IX; 9, p. 58–59.
<i>Leptodeira annulata bakeri</i>	×						1, p. 114; 2, p. 126–128; 9, p. 59, pl. Va.
<i>Crotalus durissus unicolor</i>	×						1, p. 114; 2, p. 131–135, pl. XIb, XIIa.

Liotyphlops albirostris (Ptrs.)

Helminthophis albirostris, BRONGERSMA, 1940, p. 116-117.

CURAÇAO: Pietermaai (E. part of Willemstad), IV.1951, 1 spec., leg. Brother M. Arnoldo; Pietermaai, II.1954, 2 spec., leg. Brother M. Arnoldo; found by schoolboy near ant-hole.

In the previous paper (BRONGERSMA, 1940, p. 116) mention was made of a specimen of *Helminthophis albirostris* from Curaçao. At the time I expressed some doubt as to the locality record. This doubt has now proved to be unfounded, for five further specimens have been taken on the same island; three of these have been examined by me, and two others (also from Pietermaai) are in the possession of Brother ANDREAS CORSINI, Curaçao. Therefore *Liotyphlops albirostris* (*Helminthophis albitrostris* auct.) can now definitely be added to the faunal list for the island. Dr. HUMMELINCK is of the opinion that the species may have been accidentally introduced from the mainland by coasters.

Typhlops richardii (Dum., Bibr. & Dum.)

Typhlops richardii, SCHMIDT, 1928, p. 26, 151, 153, 155; BARBOUR, 1937, p. 148.

ST. THOMAS: Hawk Mt., 8.IV.1954, 1 spec., leg. G. A. Seaman.

Typhlops platycephalus Dum. & Bibr.

ST. CROIX: Estate Brooks Hill, 25.V.1955, 1 ♀, leg. A. Henderson, don. G. A. Seaman (crushed by a bulldozer).

The specimen is in too bad a state for it to be identified with any certainty.

Anteriorly the scales are placed in 22 rows; in front of the vent in 20 rows. The nasal is completely divided, and it is in contact with the first and second labials; the nasal cleft starts from the second upper labial. The preocular is in contact with the third upper labial only.

The rostral is narrow. In ventral view it expands towards the tip of the snout. In upper view the rostral shows almost straight borders; this scute is slightly wider posteriorly than at the tip of the snout. The posterior tip of the rostral is obtusely pointed, and not broadly rounded as in the specimen of *Typhlops richardii* from St. Thomas. The rostral extends to the anterior level of the eyes. The anterior border of the eye is situated under the preocular.

As the specimen is much damaged it is not possible to count either the number of scale rows at the middle of the body, or the number of scales from head to tip of tail.

The back is greyish brown, the ventral surface yellowish. It seems that the yellowish colour encroaches upon the dark colour of the back at the base of the tail, but the state of preservation makes it impossible to be quite certain about this.

Not much is known about the *Typhlops* species occurring on St. Croix. BARBOUR (1915, p. 77) mentions an albinistic *Typhlops lumbricalis* L. from St. Croix, and this

species is also recorded as occurring on that island by BARBOUR & RAMSDEN (1919, p. 186). SCHMIDT (1928, p. 151) mentions *Typhlops richardii* Dum. & Bibr. from St. Croix ¹⁾. BARBOUR (1930b, 1935, 1937) does not mention the locality St. Croix for any of the *Typhlops* species included in his list of Antillean reptiles.

On the basis of the descriptions of *Typhlops* species from Porto Rico and some adjacent islands published by RUTHVEN & GAIGE (1935), the specimen from St. Croix most closely resembles *Typhlops platycephalus* Dum. & Bibr. In its distribution (RUTHVEN & GAIGE, 1935, p. 11) this species comes close to St. Croix, and therefore I have tentatively referred the St. Croix specimen to *Typhlops platycephalus* Dum. & Bibr.

Leptotyphlops albifrons (Wagl.)

Leptotyphlops albifrons, BRONGERSMA, 1940, p. 117.

BONAIRE: Kralendijk, 16.XI.1951, captured in house, 1 spec.

Alsophis nicholsi richardi Grant

Alsophis nicholsi richardi GRANT, 1946, p. 124.

Dromicus antillensis, BOULENGER, 1894, p. 123 (part.); WERNER, 1929, p. 109 (part.).

Alsophis antillensis, BARBOUR, 1914, p. 336, 357 (part.); BARBOUR, 1930a, p. 83; BARBOUR, 1930b, p. 112 (part.); BARBOUR, 1935, p. 136 (part.); BARBOUR, 1937, p. 157; WESTERMANN, 1953, p. 55.

Leimadophis antillensis antillensis, AMARAL, 1929, p. 164 (part.).

St. THOMAS: Savannah, V.1950, 1 ♀, leg. G. A. Seaman.

Scales in 19 rows on neck, 19 rows at mid-body, 15 rows in front of the vent; 185 ventrals, anal 1/1; subcaudals 105/105 + n; one preocular; two postoculars; 8 upper labials, the third to fifth bordering the orbit; temporals 1 + 2 + 3 on the left; on the right a small upper anterior temporal is present, separated from the posterior temporals by the large lower anterior temporal, which is in contact with the parietal; three posterior temporals. Rostral 1.5 times as wide as high; prefrontal 1.3 times as long as the internasal; frontal 1.8 times as long as wide, 1.3 times as long as its distance from the rostral; parietals 1.3 times as long as the frontal; loreal 1.1 times as long as high; posterior chin shields 1.5 times as long as the anterior chin shields. Teeth 15 + 2. Length of head and body 532 mm; length of tail 214 + n mm.

Alsophis rijgersmaei Cope

Plate IVa

Alsophis rijgersmaei COPE, 1869, p. 154, 159; BARBOUR, 1914, p. 334, 357; BARBOUR, 1930b, p. 112; BARBOUR, 1935, p. 87, 136; BARBOUR, 1937, p. 92, 157; WESTERMANN, 1953, p. 55; WESTERMANN, 1955, p. 62.

¹⁾ The same author (SCHMIDT, 1928, p. 151) also records this species from Porto Rico, but this is probably an error, for the species is not mentioned in the part of his paper dealing with the reptiles of Porto Rico.

- A[lsophis] rijgersmaei*, BARBOUR, 1914, p. 334.
Alsophis rigersmaei, BARBOUR, 1930a, p. 83.
Alsophis rijgersmai, PARKER, 1936, p. 230.
D[romicus] rijgersmaei, WERNER, 1929, p. 107, 109.
Alsophis cinereus GARMAN, 1887, p. 282; BARBOUR, 1914, p. 334, 357; BARBOUR & LOVERIDGE, 1929, p. 209; BARBOUR, 1930b, p. 112.
D[romicus] cinereus, WERNER, 1929, p. 107, 109.
Dromicus rufiventris, BOULENGER, 1894, p. 124 (part.).
Leimadophis rufiventris, AMARAL, 1929, p. 168 (part.).

ST. MARTIN: 1872, 1 ♀, leg. Rijgersma (M. L. No. 3864); Cul de Sac, 20.III.1951, 1 ♀, don. H. C. Tjon Sie Fat.
 ANGUILLA: Near Long Bay, 18.VI.1949, 1 ♂.
 ST. BARTS: Lorient, 3.I.1949, 1 ♀. (Plate IVa)

The scale counts and the ratios calculated from the measurements of the head shields are given in Table 13.

The colour pattern of the specimen collected by RIJGERSMA may be described as follows. Sides of head with a brownish streak from the nostril, through the eye, to the temple; this streak is interrupted on the loreal; it is bordered below by a dark brown line on the lower postocular, along the lower border of the anterior temporal and the upper border of the seventh upper labial, and across the upper part of the eighth upper labial. The upper lip is yellowish white with some brown mottling; the dark mottling is especially developed on the fifth upper labial, where it more or less forms a vertical bar below the eye. On the neck, the outer borders of the ventrals and the lower part of the first scale row form a yellowish-

TABLE 13.
Alsophis rijgersmai

Specimen	Sex	Scale rows			Ventrals	Subcaudals	Pre-oculars	Post-oculars	Parietal in contact lower postocular	
		r.	l.	r.					l.	
St. Martin										
St. Martin, 1872, M.L. 3864	♀	23	21	19	199	94/94+1	2	2	+	+
Cul de Sac, 20.III.1951	♀	23	21	19	200	59/59+n	1	2		
St. Barts										
Lorient, 3.I.1949	♀	23	21	19	206	102/102+1	1	2	+	+
Anguilla										
Long Bay, 18.VI.1949	♂	23	21	17	203+n?	117/117+1	2	2	+	touch.

Specimen	Ros-tral w:h	Pre-frontal Inter-nasal	Frontal l:w	Frontal Dis-tance snout	Parietal Fron-tal	Loreal l:h	Chin shields post.:ant.	Length of head and body in mm	Length of tail in mm	Teeth
St. Martin										
St. Martin, 1872, M.L. 3864	1.5	1.3	2.2	1.4	1.2	1.3	1.4	498	175	16+2
Cul de Sac, 20.III.1951	1.5	1.1	1.7	1.2	1.4	1.7	1.3	689	—	16+2
St. Barts										
Lorient, 3.I.1949	1.5	1.3	2.1	1.5	1.2	1.5	1.2	558	203	17+2
Anguilla										
Long Bay, 18.VI.1949	1.6	1.4	1.8	1.4	1.3	1.6	—	615	276	15+2

white line; the second row and the lower half of the third row form a dark line; the fourth and fifth rows are whitish. Slightly more posteriorly, scale rows 1 to 3 are buffish, and each of the scales is marked with dark brown dots. From the fourth row across the back to the fourth row of the other side, the general colour is greyish, all scales being dotted with black. On the vertebral area the neck shows black spots enclosing pale areas, or the dots have fused into short longitudinal black streaks. Somewhat more posteriorly dark spots with pale centres are present, and these together form a rather indistinct reticulation. On the caudal half of the back the central six rows are heavily mottled with black, and thus a blackish vertebral stripe is formed.

The chin and throat are powdered with greyish; each of the chin shields shows a yellowish area. On each side of the throat a brownish line is present that is continued on the anterior ventrals. Anteriorly the ventrals are yellowish white; brownish mottling is present on the lateral part of each ventral (except for the yellowish-white outer border). Some brownish mottling also occurs on the medial part of the ventrals, but anteriorly the yellowish white preponderates. More posteriorly the brownish mottling of the ventrals gradually takes up more space; the ventral surface then becomes brownish with yellowish-white spots, and in the posterior half of the specimen the ventral surface is uniformly brownish.

The second specimen from St. Martin shows a rather different colour pattern on the body. On the neck more or less distinct pale spots are present on the vertebral region; these spots occupy about six scale rows. Somewhat more posteriorly the pale spots become smaller; they are more or less lozenge-shaped, about three scales wide, and are arranged in such a way that they tend to form a pale zig-zag line. Still more posteriorly this line becomes narrower, and straight, and shows many interruptions; only isolated scales of the eleventh row still remain whitish. In the posterior half of the body the back is dark brown, with here and there some pale brown scales that form a not very distinct reticulation.

In the female from St. Barts the brown streak on the side of the head starts from the anterior border of the nasal; it becomes narrower on the neck, where it is followed by a series of four dark brown spots, with pale borders on scale rows 4 and 5. A dark line is present on the adjoining halves of the scale rows 7 and 8. The upper lip is heavily powdered and mottled with brown; there is a more or less distinct dark bar below the eye. The back shows irregular dark cross-bars with paler borders; posteriorly the scales of the back are greyish brown, with dark edges that tend to form a reticulation.

The *Anguilla* specimen has a pale cross-bar behind the head, followed by two or three pale spots.

In the male from *Anguilla*, the dissected hemipenis has a length of 49.5 mm, the sulcus spermaticus bifurcates at 16.5 mm, and the hemipenis itself bifurcates at 37.7 mm from the base. The hemipenis resembles that of *A. rufiventris*, except for one striking difference: the triangular area between the diverging branches of the hemipenis bears seven well-developed spines, arranged in two rows (one of three, and one of four spines).

WESTERMANN (1955, p. 62) supposes that on St. Martin this species may already have been exterminated by the mongoose. The specimen taken on the island in 1951 proves that the species was still present in that year.

Alsophis rufiventris (Dum., Bibr. & Dum.) Plate IVb, Vb

Dromicus rufiventris DUMÉRIL, BIBRON & DUMÉRIL, 1854, p. 668; BOULENGER, 1894, p. 124 (part.); WERNER, 1929, p. 109.

Alsophis rufiventris, GARMAN, 1887, p. 282; BARBOUR, 1914, p. 334, 357; BARBOUR, 1930a, p. 83; BARBOUR, 1930b, p. 112; BARBOUR, 1935, p. 137; PARKER, 1936, p. 230, 231; BARBOUR, 1937, p. 157; WESTERMANN, 1953, p. 55.

Leimadophis rufiventris, AMARAL, 1929, p. 168 (part.).

SABA: IV.1937, 4 ♂♂; The Bottom, 28.II., 20.VII, 23.VII, 24.VII.1949, 5 ♂♂; surroundings of The Bottom, 20.VII, 21.VII, 22.VII.1949, 3 ♀♀; near The Bottom?, 20.VII.1949, 1 ♀; The Bottom, 23.VII.1949, 2 ♀♀; road to The Bottom, 19.VII.1949, 1 head. (Plate IVb)

St. EUSTATIUS: Concordia, 8.VII.1949, 1 ♂; 12.VII, 14.VII.1949, 2 ♂♂; crater of The Quill, 20.III.1950, 1 ♂, leg. J. H. Westermann; bottom of The Quill, 10.VII.1953, 1 ♂, leg. A. L. Stoffers; near The Quill, 8.VII.1949, 1 ♀; near Oranjestad, 9.VII.1949, 1 ♀; east part, 16.VII.1949, 1 ♀. (Plate Vb)

"BRAZIL": 2 ♂♂, M.L. No. 369.

The scale counts are given in Table 14.

Scales on the neck in 23 rows, in some specimens in 25 rows just behind the head;

TABLE 14.
Alsophis rufiventris

Specimen	Sex	Scale rows			Ventrals	Subcaudals	Pre-oculars	Post-oculars	Parietal in contact lower postocular	
		r.	l.	touch.					r.	l.
Saba										
Saba, IV.'37	♂	23	21	19	215	$1/a + 1 + 4/a + 110/110 + n$	1	2	-	-
Saba, IV.'37	♂	23	23	19	214	119/119 + n	1	2	-	-
Saba, IV.'37	♂	23	23	19	218	120/120 + 1	1	2	+	-
Saba, IV.'37	♂	23	23	19	?	116/116 + 1	1	2	-	-
Bottom, 28.II.'49	♂	23	23	18	209	117/117 + 1	1	2	+	-
Bottom, 20.VII.'49	♂	25	23	19	217	117/117 + 1	1	2	+	-
Bottom, 23.VII.'49	♂	23	23	19	214	105/105 + n	1 ¹⁾	2	+	-
Bottom, 24.VII.'49	♂	23	23	19	215	118/118 + n	1 ¹⁾	2	+	touch.
Bottom, 20.VII.'49	♂	23	23	17	215	120/120 + 1	1 ¹⁾	2	+	+
near Bottom 20.VII.'49	♀	25	23	19	218	99/99 + n	1	2	-	-
near Bottom 21.VII.'49	♀	23	23	19	210 + ¹ / ₈	97/97 + n	1	2	+	-
near Bottom 22.VII.'49	♀	25	23	19	217	96/96 + n	1	2	-	-
near Bottom 20.VII.'49	♀	23	23	19	215	95/95 + n	1	2	+	+
Bottom 23.VII.'49	♀	25	23	19	211	98/98 + n	1	2	-	-
Bottom 23.VII.'49	♀	25	23	19	218	70/70 + n	1 ¹⁾	2	+	-
Bottom road 19.VII.'49	-	-	-	-	-	-	1	2	+	-
St. Eustatius										
Concordia, 8.VII.'49	♂	23	23	17	214 + ¹ / ₁	120/120 + n	1	2	-	+
St. Eust., 12.VII.'49	♂	23	23	19	213	17/17 + 1 + 99/99 + 1	1	2	-	-
St. Eust., 14.VII.'49	♂	25	23	19	214	117/117 + n	1	2	-	-
bottom Quill, 10.VII.'53	♂	23	23	19	214	117/117 + n	1	2	-	-
crater Quill, 20.III.'50	♂	23	23	19	213 + ¹ / ₀	103/103 + n	1	2	-	-
near Quill, 8.VII.'49	♀	23	23	19	215	95/95 + n	1	2	-	-
Oranjestad 9.VII.'49	♀	25	23	19	214	97/97 + 1	1	2	+	+
east part, 16.VII.'49	♀	25	23	19	212	100/100 + 1	1	2	+	+
"Brazil", M.L. 369	♂	25	23	19	212 + ⁰ / ₁	122/122 + 1	1	2	+	+
"Brazil", M.L. 369	♂	23	23	19	214	119/119 + 1	1 ¹⁾	2	+	-

1) The preocular shows an incisure into its anterior border.

at mid-body in 23 (or, rarely, in 21) rows; in front of the vent in 19 (rarely, in 18 or 17) rows. The scale reduction in a male from Saba takes place as follows:

$$\begin{array}{cccc}
 118 & 137 & 192 & 209 \\
 23 \left[\begin{array}{c} 4 + 5 \\ 4 + 5 \end{array} \right] & 21 \left[\begin{array}{c} 3 + 4 \\ 4 + 5 \end{array} \right] & 19 \left[\begin{array}{c} 8 + 9 \end{array} \right] & 18
 \end{array}$$

116 132 192

; in another male, which has 25 scale

rows just behind the head, the reduction to 23 rows comes about as follows:

$$\begin{array}{c}
 4 \\
 25 \left[\begin{array}{c} 6 + 7 \\ 5 + 6 \end{array} \right] 23. \\
 5
 \end{array}$$

Ventrals 209–218 in males, 211–218 in females. Anal divided. Subcaudals 116–122 pairs + 1 in seven males; 97–100 pairs + 1 in three females (Table 14). The tail is mutilated in 14 out of 24 specimens; GARMAN (1887, p. 282) mentions that, of the 21 specimens examined by him, 9 had a mutilated tail. Taking these two series together, 23 specimens out of 45 (i.e., 51.11%) have an incomplete tail.

All specimens have one preocular, but in some this shield exhibits an incisure into its anterior border. Two postoculars. Temporals $1 + 1 + 2$, $1 + 2$ or $1 + \frac{1+1}{1}$. Eight upper labials, of which the third, fourth, and fifth border the orbit. Ten lower labials, of which the anterior five are in contact with the anterior chin shields; one specimen has 11(5) on one side, and another 9(4) on one side; in a further specimen a small triangular scale is present at the border of the lip between the fifth and sixth lower labials (one side only).

Rostral 1.4–1.8 times as wide as high. Prefrontals 1.1–1.7 times as long as the internasals. Frontal 1.6–1.9 times as long as wide, 1.0–1.3 times as long as its distance from the tip of the snout. Parietals 1.1–1.5 times as long as the frontal. Loreal 1.1–2.1 times as long as high. The posterior chin shields are 1.2–1.7 times as long as the anterior chin shields.

Maxillary teeth: $18 + 2$ (five specimens examined).

Alsophis rufiventris shows distinct sexual dimorphism in its colour pattern, as is shown by 14 males and 9 females from St. Eustatius and Saba.

Colour pattern of male. Upper surface of head greyish, with an ill-defined longitudinal dark marking on the frontal and along the median borders of the parietals. Sides of head with a brown streak, which starts behind the nostril, passes through the eye, and widens on the temple. This brown streak may be bordered above and below by a narrow dark-brown line. The streak continues on the sides of the neck, where, however, it is much narrower. It is situated on scale rows 4 and 5; more posteriorly it breaks up into a series of spots, the centre of each spot being formed by a brown scale of the fifth row, bordered above by a blackish semi-circle. Still more posteriorly, where the number of scale rows has become reduced, a brown line is found on scale rows 3 and 4.

A second dark line originates on the neck at some distance from the head. It occupies scale rows 7 and 8; posteriorly it is present on scale rows 6 and 7. Between the two dark lines a pale line is present. A horseshoe-shaped pale mark, with a black posterior border, is found on the occiput. It is followed by a short longitudinal

pale mark that covers about $3\frac{1}{2}$ scales of the vertebral row. Behind this mark the back shows two series of pale spots (cream-coloured or whitish); in some specimens the scales of these spots each show a black tip. The spots may fuse into pale cross-bars, separated by brownish transverse bands, each of which has a blackish anterior border. The scales of these transverse bands are heavily mottled with brown or black, but some scales are much paler than others. The most anterior pale cross-bars extend downward on the sides to the brown line on scale rows 4 and 5; more posteriorly they extend only to the dark line on scale rows 7 and 8.

The posterior part of the back shows a broad dark chocolate-brown vertebral band (about four scale rows wide), with small pale spots on either side; towards the tail the vertebral band is bordered by a pale dorso-lateral line. The tail is dark brown above, with small pale dorso-lateral spots or with indistinct pale cross-lines. A pale greyish-brown, lateral streak is present.

Upper labials cream-coloured or whitish, sparsely powdered with brown or grey, or with distinct dark mottlings that form a dark-brown lower border of the lip and a distinct infra-orbital bar.

The chin and throat are cream-coloured, sparsely powdered with grey, or heavily mottled with grey and brown so as to become brown with small cream-coloured markings.

The anterior ventrals are cream-coloured sparsely dotted with grey; more posteriorly the greyish spots become more numerous, and towards the vent the ventrals are greyish or brownish with some cream-coloured spots or marks along their posterior border. The lower surface of the tail is dark brown.

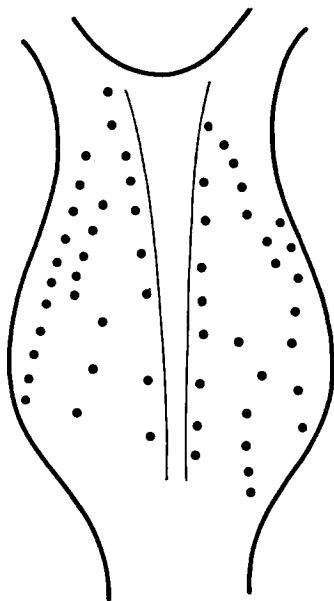
Colour pattern of female. The colour pattern of the head is similar to that in the male. A horseshoe-shaped pale mark and three or four pairs of pale spots may be present on occiput and nape, but the females never show the long series of pale spots or pale cross-bars found in the male. The vertebral area shows two series of short blackish streaks on the eleventh scale row of either side, separated by a narrow whitish line on the vertebral scale row. Here and there the blackish streaks of the right and left sides alternate; posteriorly they fuse into a broad dark vertebral band. A dark-brown line is present on scale rows 4 and 5 (posteriorly on rows 3 and 4). A second dark line is present on scale rows 7 and 8; more posteriorly it is broken up into short streaks, and as the number of scale rows becomes reduced, this series of short streaks passes to scale rows 6 and 7, and eventually to rows 5 and 6. The outer borders of the ventrals are greyish brown; a series of spots is present on scale rows 2 and 3, posteriorly on rows 1 and 2.

The hemipenis has been examined in two specimens by dissection; in one specimen it had been everted by injection. The hemipenis is long; it extends to below the twenty-third subcaudal. In a male from St. Eustatius the dissected hemipenis has a length of 55 mm. The sulcus spermaticus bifurcates at 19.5 mm from the base, and the hemipenis itself bifurcates at 42.5 mm from its base.

The surface along which the sulcus spermaticus extends is covered with hundreds of small spinules; the triangular area between the diverging branches of the sulcus is also covered with spinules, and at the base of each branch of the hemipenis one strong spine is present.

The reverse surface is divided into three: on each side there is an elevated area bearing well-developed spines, and between these areas is a wide central groove,

which is covered with spinules. The spines are placed in more or less regular longitudinal rows; the arrangement of the spines is shown in the diagram in Fig. 83. At the base of the central groove there are about 9 spinules in a transverse row; distally about 18 spinules are present in a transverse row; about 46 spinules can be counted down the length of this groove. Small spinules are also present between the rows of large spines.



On the sulcus side the two branches of the hemipenis are covered with calyces; these calyces have scalloped borders, armed with spinules. The calyculate part of the branch is separated from the reverse side by a flange, which is also armed with spinules. The reverse side is smooth, except for a longitudinal fold with spinules.

As regards the structure of the hemipenis, there is no difference between the males from St. Eustatius and those from Saba. The situation is also the same in the "topotype" M.L. No. 369 (like the holotype, said to have come from "Brazil"): the dissected hemipenis has a length of 55 mm, bifurcation of the sulcus takes place at 19 mm, and bifurcation of the hemipenis at 39 mm, from its base.

Stomach contents: A male from Saba had swallowed an *Anolis*.

Fig. 83. *Alsophis rufiventris* (Dum., Bibr. & Dum.), diagram of the arrangement of the spines on the hemipenis.

Leimadophis triscalis (L.)

Leimadophis triscalis, BRONGERSMA, 1940, p. 125-127, 124, pl. XIa.

CURAÇAO: Malpays, 21.II.1955, 1 ♀; Caracas Baai, 19.III.1955, 1 ♀, leg. H. Scheer.

Scales 17, 17, 15, Ventrals 186 + 1/1 + 2, Anal 1/1, Subcaudals 40/40 + n
17, 17, 15, 190, 1/1, 70/70 + 1

Both specimens have one preocular and two postoculars. In the specimen from Caracas Bay, the right preocular is nearly completely divided into two shields by a deep incisure into its anterior border, and the right lower postocular has fused with the fifth upper labial.

In the specimen from Malpays the pattern of scale reduction has been studied:

	116	118	123	189
17	[3 + 4]	16	[3 - 4]	17
	—		—	[3 + 4]
	116	118	121	189

Although the number of scale rows becomes reduced to 15 at some distance in front of the vent, just above the vent the number rises again to the original 17 over a very short distance.

In one of the males from Curaçao (BRONGERSMA, 1940, p. 12), the hemipenis was examined. It extends to the fourteenth subcaudal shield. The hemipenis is bifurcate; it is single throughout 78.7% of its length, but the sulcus spermaticus bifurcates much more proximally, at 41.7% of its length. In the single part of the hemipenis the area between the branches of the sulcus bears numerous spines. The branches of the hemipenis do not show calyces; they are covered with spines; each tip shows an obliquely placed apical disc.

Length of hemipenis 23.5 mm. The sulcus spermaticus bifurcates at 9.8 mm from the base; the hemipenis bifurcates at 18.5 mm from the base.

Leptodeira annulata bakeri Ruthven

Plate Va

Leptodeira annulata bakeri, BRONGERSMA, 1940, p. 127-128, 126.

ARUBA: Eagle Petr. Cy area, 1.V.1955, 1 ♂ (Plate Va); Aruba, 1955, 1 ♀, leg. J. G. van den Bergh.

Ventrals: ♂, 179; ♀, 173. Anal: 1/1. Subcaudals: ♂, 83/83 + 1; ♀, 15/15 + n. Upper labials: ♂, 8 (r: 3, 4, 5; 1: 4, 5); ♀, 8 (4, 5). One preocular in the female; a preocular with a subocular in the male (both sides). Two postoculars. Length of head and body: ♂, 352 mm, ♀, 548 mm; length of tail: ♂, 122 mm.

The mode of scale reduction is slightly different in these two specimens:

	115	119	139	142	179
♂	19 $\left[\begin{array}{c} 9 + 10 \\ - \\ 115 \end{array} \right]$	18 $\left[\begin{array}{c} - \\ 9 + 10 \end{array} \right]$	17 $\left[\begin{array}{c} 9 \end{array} \right]$	16 $\left[\begin{array}{c} 7 + 8 \\ - \\ 15 \end{array} \right]$	
	113	114	156	173	
♀	19 $\left[\begin{array}{c} 10 \end{array} \right]$	18 $\left[\begin{array}{c} 9 + 9 \end{array} \right]$	17 $\left[\begin{array}{c} 7 + 8 \\ 8 + 9 \end{array} \right]$	15	
	113	114	156	173	

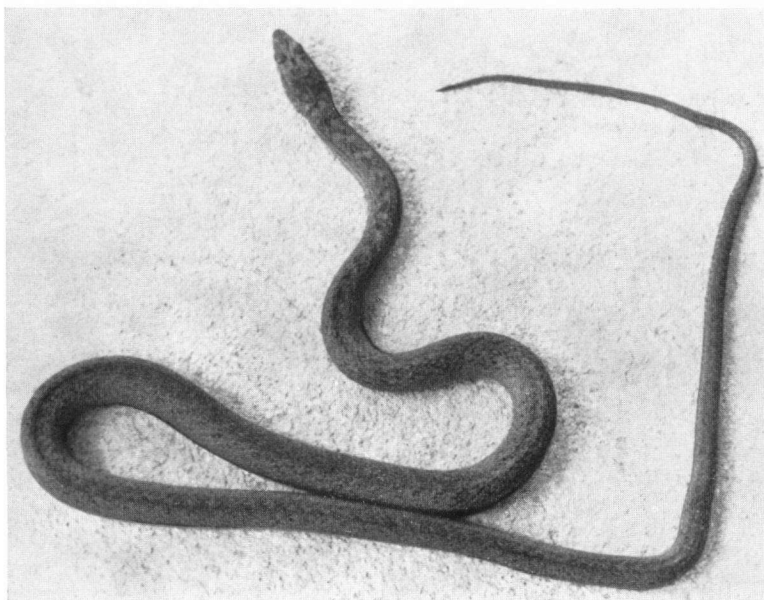
In the female the rudimentary left lung measures 3.5 mm, which is 0.64% of the length of head and body.

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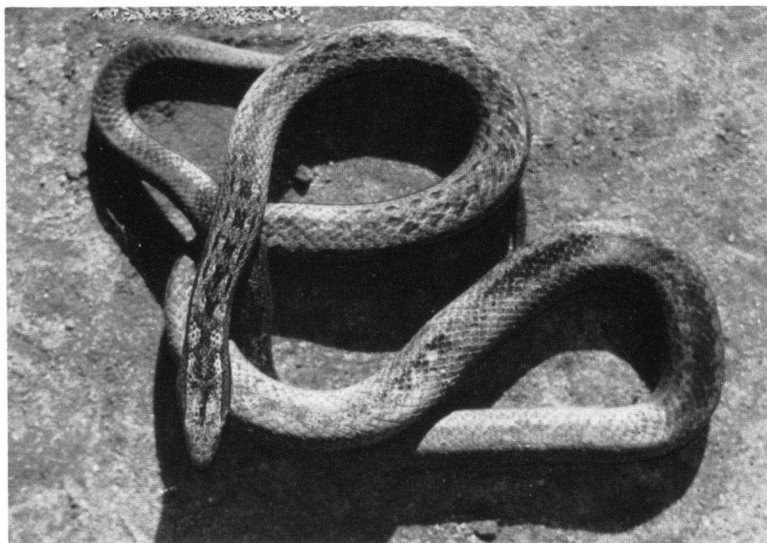
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PLATE IV



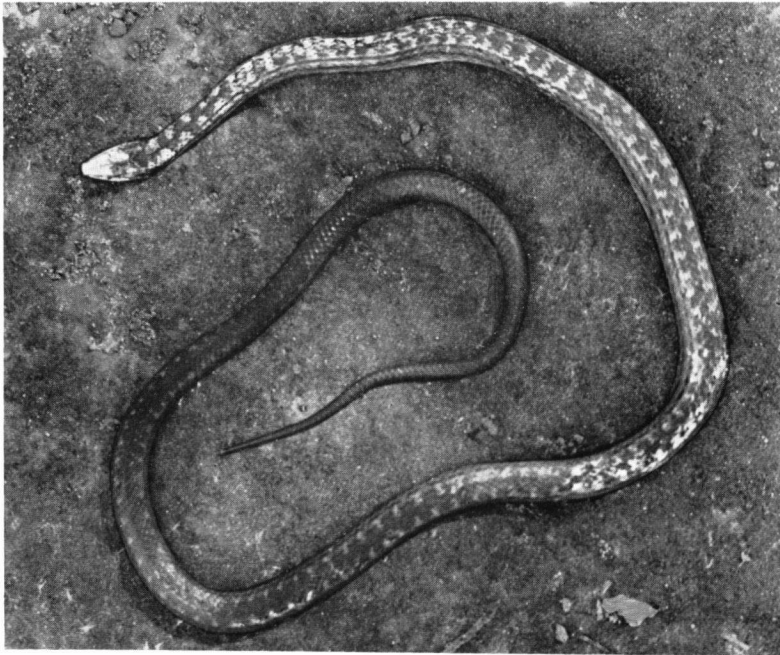
IVa. *Alsophis rijgersmai* Cope, female, from St. Barts.



IVb. *Alsophis rufiventris* (Dum., Bibr. & Dum.), female, from Saba.



Va. *Leptodeira annulata bakeri* Ruthven, male, from Aruba.



Vb. *Alsophis rufiventris* (Dum., Bibr. & Dum.), male, from St. Eustatius.