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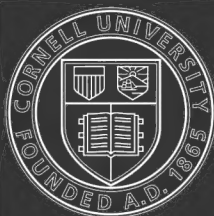
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ON THE

SERPENTS OF NEW-YORK;

WITH A NOTICE OF A SPECIES NOT HITHERTO INCLUDED
IN THE FAUNA OF THE STATE.

BY SPENCER F. BAIRD.



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BY SPENCER F. BAIRD.

WASHINGTON, D. C.

AT the suggestion of Dr. T. ROMEYN BECK, Secretary of the Board of Regents of the University of New-York, I embrace the occasion of adding a serpent, not hitherto included in the Fauna of New-York, to present the principal characters of the genera of New-York Ophidians, with a brief synopsis of the species. The entire number described by Dr. DEKAY, in the Fauna of New-York, amounted to fifteen, distributed into seven genera : to these Mr. GEBHARD, the able Curator of the State Cabinet, has added a sixteenth, *Crotalophorus tergeminus*. The species I now propose to notice is the *Storeria occipito-maculata*, one of the most abundant of all, though, on account of its diminutive size, usually overlooked ; thus making the seventeenth.

My attention was first called to the existence of this species in the State by Dr. AVERY J. SKILTON, of Troy, who, in 1847, showed me the first specimen I had ever seen. Subsequently I found it very common on Lake Champlain, at Westport, N.Y. Usually associated with the *Tropidonotus dekayi* of HOLBROOK (*Storeria dekayi*, B. & G.), it has a strong resemblance to it in general appearance as well as size, and indeed has often been confounded with it, though easily distinguishable by well-marked characters.

The particular features of this serpent will be given in the synopsis of the New-York species.

With the great increase in the number of known species of North-American serpents, it has become impossible to place all in the genera to which American herpetologists have hitherto assigned them. The magnificent work of Dr. HOLBROOK, completed in 1842, gives forty-seven species as the result of his laborious investigations, continued for many years, among our Ophidia. Owing, however, to the immense accessions supplied by the many government expeditions, especially by the United States and Mexican Boundary Survey, this number has been greatly enlarged; so much so, indeed, that at least one hundred and thirty species are known to exist in this country, north of Mexico. The necessity for greater precision in defining not only the specific, but also the generic features of this vast number, induced Mr. GIRARD and myself to take up the subject from the beginning, and remodel the whole. In the course of our investigations, we discovered that many genera, supposed to be common to Europe and America, had no such extended distribution; a critical comparison of different species from the two countries, considered as of the same genus, resulting in the detection of differences in generic features.

It may be proper to premise that the difficulties in the way of any accurate comparisons or investigations into this subject were greatly increased by the almost entire absence of systematic treatises on the Colubridæ, to which family most North-American species belong. The great work on Reptiles by Messrs. DUMERIL and BIBRON (*Erpétologie Générale*) has been delayed completion for fourteen years, confessedly on account of the difficulty of coming to any correct conclusion in regard to the classification of the Ophidia. It is only within a few months that M. DUMERIL has presented his views of the arrangement of the serpents in a memoir read before the Academy of Sciences, Paris, no copy of which has yet reached this country. JOHN EDWARD GRAY, under whose auspices the valuable series of British Museum Catalogues has been prepared, has likewise omitted the Colubridæ. Other systematic writers, as FITZINGER, OPPEL, WAGLER, &c. have, it is true, given us something on this subject; but their arrangement has been

either too vague for practical use, or not adapted to the American species. We have had, therefore, no alternative but to recast the whole with the extensive material we had on hand.

The characters upon which the genera adopted are founded, as published in the work containing the results of these investigations*, consist of the numbers, shape, and position of the various plates on the head; the smoothness or carination of the scales; the division or unity of the most posterior of the abdominal scutellæ, and of those beneath the tail, and some other peculiarities. Owing to the difficulty and expense of procuring skeletons of the genera, we found it impossible, at the time, to derive much assistance from osteological characters: subsequent examination of some forms, however, has indicated a very decided harmony between the internal and external characters. It is true that sometimes slight variations in the number and shape of the plates and rows of scales were detected, even in different sides of the same individual; but generally the constancy in character was so remarkable as to lead us to rely quite firmly on this mode of arrangement, and to consider the deviations as abnormal conditions, such as are met with in the most constant types. This view is strengthened by the fact that any variation was rarely symmetrical on both sides; one side only varying, as a general rule. Of less rank we found to be the number of longitudinal rows of scales on the back and sides. As, too, in nearly every instance, we found the pattern of coloration to be, with very few exceptions, much the same, in the various species of the same genus, as determined by the preceding features, we felt warranted in giving the pattern (not the tint) as a secondary, perhaps tertiary character, of great convenience in grouping species into genera, or their subdivision.

The number of genera into which the 119 species of N. American serpents described in the catalogue are divided is 35, or an average of nearly 3.4 to 1. The 47 species of Dr. HOLBROOK are divided

* Catalogue of North-American Reptiles in the Museum of the Smithsonian Institution. Part I. Serpents. By S. F. BAIRD and C. GIRARD. 8vo. pp. 188. Smithsonian Institution, Washington, January 1853.

among 15 genera, or 3.13 to 1. The 15 species described by Dr. DEKAY in the Natural History of the State are arranged in 7 genera, a proportion of 2.14 to 1 ; or, adding with the sixteenth species of Mr. GEBHARD, an additional genus, we have 2 to 1. It will thus be seen, that instead of a multiplication of genera in our work, their proportional number has actually been diminished.

The 17 species of New-York Ophidia, as now given, belong to 14 of the genera of the Smithsonian Catalogue, or a proportion of 1.21 to 1 ; thus embracing two-fifths of the genera described, although the number of species is only one-seventh of those enumerated as North-American. It is a matter of much interest to find so large a proportion of American genera included within the limits of the State. The generic features will thus become of use in the speedy discrimination of species, as but three of the genera have more than one species to each.

To facilitate the appreciation of the generic character of the synopsis, as well as to aid in the determination of species, I have added to the present article two plates containing a view from above and on the side of each one of the seventeen species. All these outlines are entirely original, and in nearly all cases taken from New-York specimens. No. 9, or *Scotophis alleghaniensis*, I have lettered, so as to correspond with the following explanation of terms. All are the size of life, but the numbers 14, 15, 16, 17, which are twice natural size.

EXPLANATION OF TERMS USED.

THE *vertical* plate (*v*) is the central one in the middle of the head above, having on each side of it the *superciliaries* (*s,s*), which form the upper part of the orbit. The two plates behind the vertical are the *occipitals* (*o,o*); the pair in front of it, the *postfrontals* (*p,f*). The *prefrontals* or *anterior frontals* (*a,f*) are situated in front of the postfrontals; and anterior to these, and terminating the snout, is the *rostral* (*r*). The plates immediately in front of the eye are the *anteorbitals* (*a*): those behind it are the *postorbitals* (*p,o*). In advance of the anteorbital is the *loral* (*lo*); between which and the rostral are the two *nasals* (*n*), with the nostril between them. The *upper* and *lower labials* (*l,l*) margin the upper and lower jaws: only one of each series is marked. The *temporal* shields (*t*) are situated between the upper labials and the occipitals. The *infra-maxillary* or *mental* scutellæ or shields are just within the lower labials: these cannot be shown in the figure.

The arrangement on the top of the head of one rostral, two pairs of frontals, one vertical with one superciliary on each side, and one pair of occipitals we have considered as typical or normal, from which but few of the genera described vary. Sometimes one plate occupies the place of the two prefrontals; and in some genera a second median plate is seen between the rostral, frontals and vertical. On the side of the head we have sometimes but one nasal, and sometimes either the loral or the anteorbitals may be wanting. Where the latter condition exists, it is sometimes difficult to determine which plate has disappeared. A clue is to be found in the shape of the remaining plate: if this be longitudinal, it is probably the loral; if vertical, or divided into two or more, one above the other, it is to be considered as anteorbital. The loral belongs to the postfrontals, and the anteorbital to the vertical, the posterior edges in the former and the anterior in the latter generally ranging. Thus when the vertical plate is very short, the anteorbital is also short or wanting entirely; and the same relation holds good between the loral and postfrontals.

Of the five numbers given at the end of the descriptions, the first indicates the number of the abdominal scutellæ from chin to anus; the second is that of the pairs of subcaudal scutellæ; the third, the dorsal rows, or the number of rows of scales around the body (excluding the abdominal series): the fourth number shows the entire length of the animal; and the fifth, the length of the tail in english inches.

In referring to the dorsal rows, the exterior one, or that next the scutellæ, is considered to be the first, unless the contrary is stated.

When there are two numbers separated by the symbol (+) at the beginning of the measurements, the first indicates the number of entire abdominal scutellæ; the latter, of those that are bifid or divided. The subcaudal scutellæ are to be considered as divided or in pairs, unless mentioned to the contrary.

In enumerating the number of labial plates, those on one side of the jaws only are to be understood, and the terminal and median one on the symphysis of the upper and lower maxillaries is never included. On the upper jaw, that plate is at the end of the snout, and is the rostral.

The descriptions are all based on specimens preserved in alcohol, unless otherwise stated.

- v. Vertical ;
- s. Superciliary ;
- o. Occipital ;
- p,f. Postfrontal ;
- a,f. Anterior, or Prefrontal ;
- r. Rostral ;
- a. Anteorbital ;
- p,o. Postorbital ;
- n. Nasal ;
- lo. Loral ;
- l. Upper labial ;
- l''. Lower labial ;
- t. Temporal ;
- m. Mental.

The seventeen species of Ophidia hitherto known to inhabit New-York are as follows* :

LIST OF SPECIES.

1. CROTALUS DURISSUS, *Linn.* Rattlesnake.
2. CROTALOPHORUS TERGEMINUS, *Holbr.* Massasauga.
3. ANCISTRODON CONTORTRIX, *B. & G.* Copperhead.
4. EUTÆNIA SAURITA, *B. & G.* Striped-snake.
5. " SIRTALIS, *B. & G.* Gartersnake.
6. NERODIA SIPEDON, *B. & G.* Watersnake.
7. REGINA LEBERIS, *B. & G.* Yellowbellied-snake.
8. HETERODON PLATYRHINOS, *Latr.* Hognose.
9. SCOTOPHIS ALLEGHANIENSIS, *B. & G.* Mountain Blacksnake.
10. OPHIBOLUS GETULUS, *B. & G.* Kingsnake. ✓
11. " EXIMIUS, *B. & G.* Housesnake.
12. BASCANION CONSTRICTOR, *B. & G.* Blacksnake.
13. CHLOROSOMA VERNALIS, *B. & G.* Greensnake.
14. DIADOPHIS PUNCTATUS, *B. & G.* Ringsnake.
15. CELUTA AMENA, *B. & G.* Wormsnake.
16. STORERIA DEKAYI, *B. & G.* Spotted-snake.
17. " OCCIPITO-MACULATA, *B.* Redbellied-snake.

In addition to these, some seven or more species will, in all probability, be hereafter detected in the State : these are, *Crotalophorus massasauga*, KIRTLAND (*C. kirtlandii*, HOLBROOK), in the west ; *Nerodia agassizii* and *Scotophis vulpinus*, from the north-west ; *Nerodia nigra*, from the north ; *Heterodon niger* and *Regina rigida*, from the south, and *Pityophis melanoleucus* from the south-east.

* The numbers attached to the species are the same as on the corresponding figures of the plates.

The following analytical table will be found to contain, in a condensed form, a key to the subsequent classification of genera.

SYNOPSIS OF FAMILIES AND GENERA.

Family I : CROTALIDÆ. Erectible poison fangs, in front ; few teeth in upper jaw ; a deep pit on side of face, between the eye and nostril.

Family II : COLUBRIDÆ. No pit nor poison fangs ; both jaws fully provided with teeth ; no anal appendages.

FAMILY I : CROTALIDÆ.

Tail with a rattle.	}	with small scale-like plates..	CROTALUS.
Top of head covered...		with large plates arranged as in <i>Coluber</i>	CROTALOPHORUS.
Tail without a rattle.....			ANCISTRODON.

FAMILY II : COLUBRIDÆ.

ANTEORBITALS and LORALS both present.	Scales carinated. Postorbitals	Three. Postabdominal scutellæ	}	entire.....	EUTENIA.
				divided.....	NERODIA.
		Two. Anteorbitals.....	}	two.....	REGINA.
	one.....	SCOTOPHIS.			
		Numerous. Labials not in orbit.....		HETERODON.	
ANTEORBITALS and LORALS both present.	Scales smooth. Postab. scutella	Vertical plate	}	entire.....	OPHIBOLUS.
				Divided. { Long, narrow. Lower anteorbital minute.	BASCANION.
					Broad, short. Nasal ..
	two.....	DIADOPHIS.			
ANTEORBITALS absent.	Scales smooth.			CELUTA.	
LORAL absent.	Scales carinated.....			STORERIA.	

I shall now proceed to give a brief description of the genera and species of serpents inhabiting New-York, with some general remarks upon each.

SYNOPSIS OF GENERA AND SPECIES
OF
NEW-YORK SERPENTS.

GENUS CROTALUS, LINN.

GEN. CHAR. Upper surface of head covered with small plates, scale-like, with a few larger ones in front. The tail is terminated by a well developed rattle. A deep pit between the eyes and the nostrils. Subcaudal scutellæ entire. Temporal and labial shields small and convex.

1. CROTALUS DURISSUS*, L.—Rattlesnake.

SPEC. CHAR. Head angular. Scales between the superciliaries small, numerous, uniform. Plates above snout, 2 anterior frontal, and 5 postfrontal. Suborbital chain continuous, of large scales: two rows between this and labials. Labials 12-14 above, fifth largest; 13-15 below. Rows of scales on the back 23-25, all carinated: carination on outer row obsolete. Tail black. Above sulphur-brown, with 2 rows of confluent brown lozenges. Light line from superciliary to angle of the mouth: behind this a dark patch. 166, 25, 23, 42, 5 (Pennsylvania).

SYNONYMS.

Crotalus durissus, LINN. Syst. Nat. I. 1766, 372.—GM. Linn. Syst. Nat. ed. xiii. I, iii. 1788, 1081.—HOLBR. N. Amer. Herp. III. 1842, 9. Pl. i.—DEKAY, N. Y. Fauna, Pt. III. 1842, 55. Pl. ix. fig. 19.—STORER, Rep. Rept. of Mass. 1839, 233.—BAIRD & GIRARD, Catal. N. Am. Serpents, 1853, 1.
Vipera caudisona americana, CATESB. Nat. Hist. Carol. II. 1743, 41. Pl. lxi.
Northern Rattlesnake.

The *Crotalus durissus*, or northern rattlesnake, is more extensively distributed throughout the United States than any other of the genus. It is

* The numbers preceding the specific name are the same with the corresponding figures on the plates.

common in the hilly or rocky districts of the Northern Atlantic States: extending to Florida, Alabama and Louisiana in the south; the Red river of Arkansas, and Iowa (possibly further) in the west. On the seacoast, it appears to be replaced by *Crotalus adamanteus*. It has, however, not yet been detected in Texas, New-Mexico or California, where its place is supplied by other species. In New-York, it seems to be most abundant on the shores of Lake George and Lake Champlain; especially in Rattlesnake mountain of the former, and Rattlesnake den of the latter, a rocky bluff between Westport and Essex. It is a little remarkable that the rattlesnake does not occur in the Adirondack regions of New-York; at least, an instance has never come to my knowledge. Such a region in Pennsylvania would be infested by them.

The bite of the rattlesnake, when received in a large bloodvessel, is most generally fatal; although, fortunately, the chances are against this point of attack. Various remedies have been proposed: among them, the application of tight ligatures between the wound and the centres of the body; scarification and suction; application of ammonia, olive oil, and the use of large doses of brandy or other spirituous liquor. All of these may be properly used, and it is a singular fact that a very large dose of spirits generally fails to produce intoxication. Many plants are supposed to possess remedial virtues; thus, a plaster of bruised leaves and stems of *Impatiens pallida* or *fulva* has a wide-spread reputation both among indians and whites. Species of plantain, *Scrophularia*, *Scutellaria*, *Hieracium*, etc., are also recommended. Little or no danger is to be apprehended to the operator in sucking a wound of this kind, if the mouth be sound; repeated experiment going to show that the poison is inert in the stomach. I have myself (rather foolishly, I must confess) swallowed nearly the entire contents of one gland of a large rattlesnake. Many persons put great faith in the application of powdered indigo to the wound, as also of iodine.

GENUS CROTALOPHORUS, GRAY.

GEN. CHAR. Upper surface of the head covered with nine large plates, as seen in *Coluber* and allied genera. The tail terminates in a rattle, generally smaller than in *Crotalus*. A deep pit between the eye and nostril, as in *Crotalus*. Subcaudal scutellæ entire, except a few at the end of the tail, which are bifid.

SYN. *Crotalophorus*, GRAY, Ann. Philos. 1825, 205.—B. & G. Catal. of North-American Serpents, 1853, 1.

2. CROTALOPHORUS TERGEMINUS, Holbr.—Massasauga.

SPEC. CHAR. Twenty-five rows of dorsal scales, strongly carinated, with the exception of the first row, which is perfectly smooth. Vertical plate subhexagonal, pointed posteriorly. Seven longitudinal series of blotches. A narrow band of yellowish white extends from the pit to the neck, in passing close to the angle of the mouth. 150, 21+1, 25, 29½, 2¾ (Wisconsin).

SYNONYMS.

Crotalus tergeminus, SAY, Long's Exp. Rocky Mts. I. 1823, 499.—HARL. Journ. Acad. Nat. Sc. Philad. V. iii. 1827, 372.

Crotalophorus tergeminus, HOLBR. N. Amer. Herp. III. 1842, 29. Pl. v.—B. & G. Catal. N. Am. Serp. (1853), 1—GEBH. 6th Rep. State Cab. Nat. Hist. 1853, 22.

Crotalophorus, AGASS. Lake Sup. 1850, 381. Pl. vi. fig. 6–8.
Prairie Rattlesnake, Massasauga.

As this species is not included in DEKAY'S Fauna of New-York, I give a detailed description, taken from a specimen caught in Wisconsin; referring to the Report of the State Cabinet as above quoted, for the description of the New-York specimen.

The ground color above is brown: the blotches are deep chestnut-brown, blackish externally, and with a yellowish white margin. The dorsal blotches are thirty-four in number from the head to the region opposite the anus, twenty-six of which are transversely and irregularly oblong, anteriorly and posteriorly emarginated; less so, however, posteriorly: eight are subcircular. Five or six exist on the tail from the anus to its tip, extending on the sides, the last two forming sometimes a complete ring. The next series on either side is composed of small blotches, but as intensely colored as in the other series: they alternate with the dorsal ones: they have no regularity either in outline or position. The second lateral row is composed of the largest lateral blotches: they are transversely oblong or oval on the second, third, fourth, fifth, and sixth rows of scales, and opposite the blotches of the dorsal series; consequently alternating with the third series above. The first lateral series again is composed of blotches intermediate in size between those of the third and second series: they occupy the first and second rows of scales, and extend somewhat to the abdominal scutellæ, and alternating with the adjoining series. Two undulated vittæ extend from the supraorbital plates along the neck to the first dorsal blotch, and often confluent with the latter. A linear vitta, margined with yellowish white, extends from the posterior edge

of the eye to the sides of the neck : the inferior yellow margin is the broadest, and passes from the pit close to the angle of the mouth, turning forward to the middle of the lower jaw, enclosing a semi-elliptical brown patch. Two elongated yellowish spots may be observed, diverging from both sides of the pit to the lip. The cephalic plates are deep chestnut-brown : a transverse light brown band extends across the head from one orbit to the other.

Beneath blackish brown, mixed with yellow.

This species of rattlesnake has recently been added to the fauna of New-York, in a communication by Mr. JOHN GEBHARD, the able Curator of the State Cabinet, in the Sixth Report of the State Cabinet, as follows :

“The specimen in the State Cabinet was presented by the Hon. LEVI FISK of the town of Byron, Genesee county, N.Y. Their habitat is a white-cedar swamp in said town, containing an area of about one thousand acres. During the summer season they leave the swamp, and go into the adjoining fields of grain, where they remain till autumn, when they return to the swamp and hibernate. They have not been observed at any other locality in this State. The entire length of the specimen is two feet : it has 139 abdominal plates, and 23 entire and 3 bifid under the tail, upon which there are only three rattles remaining. Mr. FISK states that one was killed last summer, that had fourteen rattles, and was a little over two feet in length ; which may be considered as the maximum size of the species ” (p. 22).

Crotalophorus tergeminus appears to be quite a northern species ; occurring also in Northern Ohio, Illinois, Wisconsin, Michigan, Minnesota, and on the plains probably to the base of the Rocky Mountains. In the south it is replaced by *C. miliaris* ; and in Texas and Mexico, by the closely allied *C. consors* and *edwardsii*. On the plains it is a frequent associate of the burrowing owl (*Athene hypogæa*) in the holes of the prairie dog, although other species of rattlesnakes have the same habit.

Its powers of injury are considerably less than those of the *Crotalus durissus*, being rarely sufficient to produce death in large animals. It is generally found in dry ridges of the prairies ; being distinguished in this from the black massasauga, or *Crotalophorus massasauga*, KIRTLAND (*C. kirtlandii*, HOLB.), which usually inhabits the swampy grounds of Northern Ohio. This latter species may be looked for, at some time or other, in the western part of the State.

GENUS ANCISTRODON, BEAUV.

GEN. CHAR. A deep pit between nostril and the eye. Nine plates on top of head. Without rattle. Poison fangs as in *Crotalus*. One pair of occipitals. A loral between the nasal and anterior orbitals. Labials excluded from the orbit by the presence of suborbital plates. Scales carinated : rows 23 in number. Subcaudal scutellæ divided posteriorly. Sometimes a small plate between the vertical and postfrontals. Habits terrestrial.

SYN. *Agkistrodon*, PAL. DE BEAUV. Trans. Amer. Phil. Soc. Philad. 1799, 381.

3. ANCISTRODON CONTORTRIX, B. & G.—Copperhead.

SPEC. CHAR. Loral present. Labials not entering into the orbit. Dorsal rows of scales 23. Color light chestnut, with inverted Y-shaped darker blotches on the sides. Labials yellowish white. 150, 40+10, 23, 27 $\frac{2}{3}$, 3 $\frac{2}{3}$ (Ohio).

SYNONYMS.

Boa contortrix, LINN. Syst. Nat. I. 273.—GM. L. Syst. Nat. ed. xiii. I. iii. 1788, 1082.

Agkistrodon mokason, BEAUV. Trans. Am. Phil. Soc. Philad. IV. 1799, 380.

Scytalus cupreus, RAFIN. Amer. Journ. Sci. I. 85.—HARL. Med. and Phys. Res. 1835, 130.

Trigonocephalus cenchrus, SCHL. Ess. Phys. Serp. Part descr. 1837, 553. Pl. xx. fig. 10 and 11.

Trigonocephalus contortrix, HOLBR. N. Amer. Herp. II. 1838, 69, pl. xiv.; and 2d ed. III. 1842, 39, pl. viii.—DEKAY, N.Y. Fauna, III. 1842, 53, pl. ix. f. 18.

Agkistrodon contortrix, B. & G. Catal. N. Am. Serpents (1853), 17.

The copperhead snake is a vicious species, and its bite is equally to be dreaded with that of the large rattlesnakes. The remedies for its bite are the same. It rarely, however, attains the dimensions of the *Crotalus durissus*, the largest specimen we have ever seen not exceeding three feet. Fortunately it is at the present day comparatively rare throughout the United States; being, indeed, almost entirely exterminated in many localities where once abundant. Its range is much the same as that of the northern rattlesnake, and it is even found in Central Texas, where I have never known the *Crotalus durissus* to occur. It is abundant in Missouri and Louisiana. Like the rattlesnakes, and some other genera, the copperhead is ovo-viviparous.

GENUS EUTÆNIA, BAIRD & GIRARD.

GEN. CHAR. Body moderately stout in some species, slenderer in others.

Scales carinated. Skin very extensible. Cephalic plates normal. Anterior orbitals 1; posterior, 3. Abdominal scutellæ all entire; subcaudal, divided. Dorsal rows of scales 19–21. Abdominal scutellæ 140–170; subcaudal, 50–120. General color, three light stripes on a darker ground: intervals with alternating or tessellated spots. Abdomen without square blotches. Mostly terrestrial. Many of the species are ovoviviparous.

SYN. *Eutainia*, B. & G. Catal. N. Am. Serpents (1853), 24.

4. EUTÆNIA SAURITA, B. & G.—Ribbonsnake.

SPEC. CHAR. Body very slender, elongated. Tail very long. Lateral stripe on the third and fourth rows of scales: dorsal rows 19. Color above, light chocolate. three stripes of uniform yellow; below the lateral stripes, light brown. Abdomen greenish white. On an average, the length of the tail is more than one-third the total length. 156, 115, 19, 35, 12½ (Pennsylvania).

SYNONYMS.

Coluber saurita, LINN. Syst. Nat. I. 1766, 385.—GM. L. Syst. Nat. ed. xiii. I. iii. 1788, 1109.—HARL. Journ. Acad. Nat. Sc. Philad. V. 1825, 352.—STORER, Rep. Rept. Mass. 1839, 229.—THOMPS. Hist. of Verm. 1842, 115.

Leptophis sauritus, HOLBR. N. Amer. Herp. III. 1842, 21, pl. iv.—DEKAY, N.Y. Fauna, 1842, 47, pl. xi. fig. 24.

Eutainia saurita, B. & G. Catal. N. Am. Serpents (1853), 24.

This slender and graceful serpent, as far as I know, is confined pretty much to that portion of the United States east of the Mississippi, being indeed most abundant in the region of the Allegheny mountains. In the far west it is replaced by *E. proxima*, and other allied species. It is generally found near the edge of woods, and not unfrequently in or about the water, in which it seems perfectly at home. It is unnecessary, perhaps, to say of this species, what is perfectly true of all the New-York species except the rattlesnakes and copperhead, that it is entirely harmless; its bite, if it should inflict one, being similar in its effects to the scratch or puncture of a pin.

5. EUTÆNIA SIRTALIS, B. & G.— Striped-snake. Gartersnake.

SPEC. CHAR. Body stout. Lateral stripe on the second and third lateral rows of scales. Olivaceous brown above the lateral stripes, sometimes nearly black : beneath these, greenish white. Dorsal stripe narrow, encroached upon by the spots. Lateral stripes not conspicuous. Two or three rows of small indistinct spots, often not perceptible, especially the lower : about 70 from head to anus. 151, 80, 19, 21, 5½ (New-York).

SYNONYMS.

Coluber sirtalis, LINN. Syst. Nat. I. 1766, 383.—GM. *L. Syst. Nat. ed. xiii. I. iii.* 1788, 1107.—HARL. Journ. Acad. Nat. Sc. Philad. V. 1827, 352.—STORER, Rep. Rept. Mass. 1839, 221.

Tropidonotus bipunctatus, SCHL. Ess. Physiogn. Serp. Part. descr. 1827, 320.

Tropidonotus sirtalis, HOLBR. N. Amer. Herp. III. 1842, 41, pl. xi.

Tropidonotus tania, DEKAY, N. York Fauna, Rept. 1842, 43, pl. xiii. fig. 27.

Eulainia sirtalis, B. & G. Catal. N. Am. Serpents (1853), 30.

The well known gartersnake is perhaps more abundant in New-York than any other species. Its distribution is very extensive, embracing the whole of the United States east of the Mississippi. It is especially common in the Adirondack region, where other species, except those of *Storeria*, seldom occur. It is generally found near the water.

The gartersnake is ovo-viviparous, and gives birth to an almost incredible number of young. Some years ago I killed a gravid female, on the Allegheny river, at Foxburg (Pa.), from which I took eighty-three young ones, six inches in length each.

GENUS NERODIA, BAIRD & GIRARD.

GEN. CHAR. Body generally stout, and almost all the species attaining a large size. Tail one-fifth or one-fourth of the total length. Scales carinated. Cephalic plates normal. Anterior orbitals generally 1, occasionally 2; posterior 3, occasionally 2. Last and sometimes penultimate abdominal scutellæ bifid; subcaudal, all bifid or divided. Dorsal rows of scales 23 - 29. Abdominal scutellæ 133 - 154; subcaudal, 66 - 80. General color, three series of dark blotches on a lighter ground, sometimes almost uniform brown or blackish. Abdomen unicolor or maculated. Habits aquatic.

SYN. *Nerodia*, B. & G. l. c. (1853), 38.

6. NERODIA SIPEDON, B. & G.—Watersnake.

SPEC. CHAR. Head rather narrow, elongated. One anteorbital; three postorbitals. Vertical plate smaller, and occipitals larger than in *N. fasciata*. Length of vertical equal to commissural line of occipitals. Inframaxillary plates extending near to posterior extremity of seventh lower labials. Dull brown, with narrow transverse light bands margined with black. Dorsal rows 23. 142-1, 68, 23, 35, 8½ (Penn.).

SYNONYMS.

Coluber sipedon, LINN. Syst. Nat. I. 1766, 379.—GM. L. Syst. Nat. ed. xiii. I. iii. 1788, 1098.—HARL. Journ. Acad. Nat. Sc. Philad. V. 1827, 351.—THOMPS. Hist. of Verm. 1842, 118.

Coluber pæcilogaster, MAX. WIED. Reise Inn. Nord. Amer. I. 1839, 106.

Tropidonotus sipedon, HOLBR. N. Amer. Herp. III. 1842, 29, pl. vi.—DEKAY, N. York Fauna, III. 1842, 42, pl. xiv. f. 31.

Nerodia sipedon, B. & G. l. c. (1853), 38.

The watersnake is an abundant species, although, from living along the edge of the water, and plunging in on the slightest alarm, it is not often captured. It may sometimes be seen in large numbers, coiled together in some bush overhanging a stream or pond.

This species has not a very extended range, being replaced in the Southern States by the *N. fasciata*, and in the far west by other species. It is, however, abundant from Massachusetts to Wisconsin, and as far south as Virginia and Ohio.

GENUS REGINA, BAIRD & GIRARD.

GEN. CHAR. Body slender. Tail subconical, very much tapering, forming one-third or one-fourth of the total length. Head conical, continuous with the body, and proportionally small. Eyes large. Mouth deeply cleft. Labials small. Loral and nasals large. Scales carinated. Cephalic plates normal. Anterior orbitals 2, occasionally 1; posterior 2, occasionally 3. Last, and sometimes last but one abdominal scutellæ bifid or divided. Subcaudal scutellæ all divided. Dorsal rows of scales 19 - 21. Abdominal scutellæ 132 - 162; subcaudal, 52 - 86. General color, five or more longitudinal dark bands on a lighter ground. Abdomen unicolor, or likewise provided with similar bands. Aquatic.

SYN. *Regina*, B. & G. l. c. (1853), 45.

7. REGINA LEBERIS, B. & G.—Yellowbellied-snake.

SPEC. CHAR. Chestnut-brown, with a lateral yellow band, and three narrow black dorsal vittæ. Abdomen yellowish, with four brown bands, two of which are lateral and two medial. Dorsal rows of scales 19, all carinated. 144+2, 81, 19, 23½, 6½ (Penn.).

SYNONYMS.

Coluber leberis, LINN. Syst. Nat. ed. x. I. 1766, 216.—GM. L. Syst. Nat. ed. xiii. I. iii. 1788, 1086.—SHAW, Gen. Zool. III. iii. 1802, 433.

Coluber septemvittatus, SAY, Journ. Acad. Nat. Sc. Philad. IV. 1825, 240.—HARL. Journ. Acad. Nat. Sc. Philad. V. 1827, 355; and Med. & Phys. Res. 1835, 118.

Tropidonotus leberis, HOLBR. N. Amer. Herp. IV. 1842, 49, pl. xiii.—DEKAY, N. York Fauna, Rept. 1842, 45, pl. xi. f. 23.

Regina leberis, B. & G. l. c. (1853), 45.

This species is quite as aquatic in its habits as the *Nerodia sipedon*. It is generally found along the banks of shallow brooks, especially where the sides and bed are covered by loose stones. It frequently occurs coiled up under broad flat stones in shallow streams. Its range extends from New-York to Wisconsin, and it is abundant in many parts of Pennsylvania and Ohio, particularly in the mountains, although it has not yet been detected further south.

GENUS HETERODON, PAL. DE BEAUV.

GEN. CHAR. Body short, stout : tail short. Head, neck, and body capable of excessive dilatation. Posterior palatine teeth longer. Head broad, short. Outline of mouth very convex, on a single curve. Orbit enclosed by a continuous chain of small plates ; the circle completed above by the superciliaries. Rostral prominent : its anterior face very broad, and turned up ; its ridge above sharp. Behind it a median plate, either in contact with the frontals or separated by small plates. Frontals in two pairs : nasals two ; loreal one or two. Dorsal rows of scales 23 - 27, carinated. Abdominal scutellæ 125 - 150 ; posterior bifid. Subcaudal scutellæ all bifid.

Colors light, with dorsal and lateral darker blotches ; or else brown, with dorsal transverse light bars : sometimes entirely black.

SYN. *Heterodon*, PAL. DE BEAUV. in LATR. Hist. Nat. des Rept. IV. 1799.

8. HETERODON PLATYRHINOS, Latr.—Blowing Viper.

SPEC. CHAR. Occipitals and verticals longer than broad, about equal in length. Centre of eye anterior. Dorsal rows 25, all carinated ; the outer sometimes smooth. Keels of the scales extending to their tips. Scales on the back quite linear anteriorly ; posteriorly they are much broader. Color yellowish gray or brown, with about 28 dark dorsal blotches from head to anus, and 15 half-rings on the tail. One or two lateral rows. Beneath yellowish. A dark band across the forehead in front of the vertical, continued through the eye to the angle of the mouth. 129+1, 53, 25, 28, 6 (Penn.).

SYNONYMS.

Coluber heterodon, DAUD. Hist. Nat. Rept. VII. 1799, 153, pl. lx. f. 28.—SAY, Amer. Journ. of Sc. I. 1818, 261.—HARL. Journ. Acad. Nat. Sc. Philad. V. 1827, 357 ; and Med. & Phys. Res. 1835, 120.

Heterodon platyrhinus, LATR. Hist. Nat. Rept. IV. 1799, 32, f. 1 - 3.—HOLBR. N. Amer. Herp. II. 1828, 97, pl. xxi. ; and 2d ed. IV. 1842, 67, pl. xvii.—DEKAY, N.Y. Fauna, III. 1842, 51, pl. xiii. f. 28.—B. & G. l. c. (1853), 51.

This curiously formed snake, known as Hognose, Blowing Viper, Spreading and Checkered Adder, etc., although supposed to be venomous, is perfectly

harmless and exceedingly inoffensive, notwithstanding its threatening appearance when flattening the head and body, and emitting a succession of hisses, similar, on a very small scale, to an engine letting off steam. To those familiar with the habits of this species in making these sibilant sounds, the question mooted in the papers, some years since, appeared supremely ridiculous, in view of the grave assertions to the contrary by some of the disputants.

It is found throughout the United States, though scarcely extending far beyond the Missouri river.

GENUS SCOTOPHIS, BAIRD & GIRARD.

GEN. CHAR. Form colubrine. Body cylindrical, very long; many individuals attaining a very large size, perhaps the largest of all North-American serpents. Head elongated, rather narrow. Vertical plate very broad, sometimes wider than long. Posterior frontals very large. Post-orbitals 2 : anteorbitals 1, generally very large; the longitudinal extension of this, and of the postfrontals, producing a much elongated muzzle. Mouth deeply cleft; outline nearly straight. Dorsal rows of scales 23 - 29 : those along the back slightly carinated (9 - 15 rows); on the sides, smooth. Abdominal scutellæ from 200 to 235; posterior bifid : subcaudals all bifid.

Color brown or black, in quadrate blotches on the back and on the sides, separated by lighter intervals. Abdomen usually coarsely blotched with darker. In one species, dark stripes on a light ground. Although very large and powerful, many of the species of the genus are characterized by their extreme gentleness, rarely become enraged even when provoked.

SYN. *Scotophis*, B. & G. l. c. (1853), 73.

9. SCOTOPHIS ALLEGHANIENSIS, B. & G.— Mountain Blacksnake.

SPEC. CHAR. Vertical plate longer than broad. Posterior upper labial largest. Outer 7 rows of scales smooth : dorsal rows 27. Abdominal scutellæ 235. Color black; below, mottled anteriorly with white. White edges to some scales, imparting an appearance of dorsal and lateral blotches, especially in the young. 234+1, 86, 27, 59½, 10¾ (Penn.).

SYNONYMS.

Coluber alleghaniensis, HOLBR. N. Amer. Herp. I. 1836, 111, pl. xx.; and 2d ed. III. 1842, 85, pl. xix.—DEKAY, N.Y. Fauna, Rept. 1842, 36, pl. xii. f. 26.
Scotophis alleghaniensis, B. & G. l. c. (1853), 73.

This species, usually confounded with the common blacksnake, may be readily distinguished by the carination of the central dorsal rows of scales, as well as by the exhibition of the white edges of the scales when these are separated. It attains a very large size; greater, perhaps, than any others in this country, except *Georgia couperi*, and the species of *Pityophis*. It is much more sluggish than the true blacksnake, and not at all belligerent when provoked. It probably ascends trees in pursuit of food, as I have killed one with a brood of five young jaybirds in its stomach.

It is by no means a common species, although its range is quite extensive.

GENUS OPHIBOLUS, BAIRD & GIRARD.

GEN. CHAR. Body rather thick : tail short. Dorsal rows 21 (in one group 23); the scales hexagonal, arranged in longitudinal series, broad, short, scarcely overlapping, nearly as high as long, all perfectly smooth and lustrous. Abdominal scutellæ 180 – 220; posterior entire : subcaudal all bifid. Head, short, depressed, but little wider than the body. Eyes very small. Vertical plate very broad. Postorbitals 2; the lower in notch between the fourth and fifth labials. One anteorbital, like the loreal, small. Nasals 2, with the nostril between them. Upper labials 7. Ground-color black, brown or red, crossed by lighter intervals generally bordered with black.

SYN. *Ophibolus*, B. & G. l. c. (1853), 82.

10. OPHIBOLUS GETULUS, B. & G.—Chainsnake.

SPEC. CHAR. Black, crossed by about thirty narrow continuous yellow lines, which bifurcate on the flanks; the very obtuse angles embracing on each side a series of very much elongated patches, and, in fact, by the union of the branches with each other, dividing the back into a succession of large black hexagons. 224, 48, 21, 30½, 4½ (S. Car.).

SYNONYMS.

- Coluber getulus*, LINN. Syst. Nat. I. 1766, 382.—GM. L. Syst. Nat. ed. xiii. I. iii. 1788, 1106.—HARL. Journ. Acad. Nat. Sc. Philad. V. 1827, 358; and Med. & Phys. Res. 1835, 122.—PEALE, Cont. Macl. Lyc. I. 1829, pl. v.—DEKAY, N. York Fauna, III. 1842, pl. x. f. 21.
- Pseudoelaps getulus*, FITZ. N. Class. Rept. 1826, 56.
- Coronella getula*, HOLBR. N. Amer. Herp. III. 1842, 95, pl. xxi.
- Anguis annulatus*, CATESB. Nat. Hist. Carol. II. 1743, 52, tab. lii.
- Ophibolus getulus*, B. & G. l. c. 1853, 85.

The chainsnake is quite maritime in its northern distribution, being rarely found in the Northern States except near the coast. It is occasionally seen in Long Island, according to Dr. DEKAY, and more frequently in Eastern New-Jersey. It is quite abundant in the Southern States. I have no evidence of its occurrence west of the Mississippi on the southern coast.

This species is sometimes called Kingsnake; and is said to wage a deadly warfare against the different species of rattlesnakes, killing and devouring them on every occasion.

11. OPHIBOLUS EXIMIUS, B. & G.—Housesnake.

SPEC. CHAR. Grayish ash, with one dorsal series of upwards of fifty transversely elliptical chocolate blotches, with two other alternating lateral series on each side. 214, 54, 21, 40½, 5½ (New-York).

SYNONYMS.

- Coluber eximius*, DEKAY, (MSS.) and N.Y. Fauna, Rept. 1842, 88, pl. xii. f. 25.
—HARL. Journ. Acad. Nat. Sc. Philad. V. 1827, 360; and Med. & Phys. Res. 1835, 123.—STORER, Rep. Rept. Mass. 1839, 227.
- Pseudoelaps Y*, BERTH. Abh. K. Ges. Wiss. Gött. I. 1843, 67, pl. i. f. 11 & 12.
- Ophibolus eximius*, B. & G. l. c. 1853, 87.
- Housesnake, Milksnake, Chickensnake, Thunder-and-lightning-snake.

The harmless milk- or housesnake, so well known from its habit of coming into the vicinity of houses, is quite common in the Northern States. It only occurs as far west as the Mississippi river. Its southern limit is uncertain, from its having been confounded with the closely allied *O. clericus*. B. & G.

GENUS BASCANION, BAIRD & GIRARD.

GEN. CHAR. Body slender, elongated : tail very long. Head narrow, deep, long. Eyes very large. Postorbitals 2 : anterior 2 ; upper very large, lower very small, in a notch between the second and third labials. Fourth labial produced up behind the eye, to meet the lower postorbital. Loral 1 ; nasals 2. Vertical much elongated and narrow, concave externally. Dorsal rows of scales 17, all perfectly smooth and subhexagonal. Abdominal scutellæ 170 - 200 ; posterior one divided : subcaudal 90 - 110, all bifid. Colors black or olive ; uniform above, lighter below. Skin between the scales black. Young blotched.

SYN. *Bascanion*, B. & G. 1. c. 1853, 93.

12. BASCANION CONSTRICTOR, B. & G.—Blacksnake.

SPEC. CHAR. Vertical diminishing for half its length, then parallel. Centre of eye over the fourth labial. In the adult, color lustrous pitch-black ; above and beneath greenish black, sometimes tinged with greenish white : chin and throat white. The young are olive, with rhomboidal dorsal blotches : beneath greenish white. 178+1, 93, 17, 40½, 10½ (Penn.).

SYNONYMS.

Coluber constrictor, LINN. Syst. Nat. I. 1766, 385.—GM. *L. Syst. Nat.* ed. xiii. I. iii. 1788, 1109.—HARL. Journ. Acad. Nat. Sc. Philad. V. 1827, 348 ; and Med. & Phys. Res. 1835, 112.—SCHL. Ess. Phys. Serp. Part. descr. 1837, 133, pl. v. f. 3 and 4.—STORER, Rep. Rept. Mass. 1839, 225.—HOLBR. N. Amer. Herp. III. 1842, 55, pl. xi.—THOMPS. Hist. of Verm. 1842, 117.—DEKAY, N. York Fauna, Rept. 1842, 35, pl. x. f. 20.

Hierophis constrictor, BONAP. Fn. Ital. II. 1841, Art. *Col. leopard.*

Vipera niger, CATRÆB. Nat. Hist. Carol. II. 1743, 48, tab. xlviii.

Blacksnake, KALM, Reise N. Amer. II. 1764, 202.—PENN. Arct. Zool. Suppl. II. 1792, 92.

Bascanion constrictor, B. & G. 1. c. 1853, 93.

The blacksnake, or blue racer, is well known to every one, from its abundance and marked traits of character. It ranges over the whole United States east of the Missouri river : how much further west it extends, is not yet ascertained.

GENUS CHLOROSOMA, WAGL.

GEN. CHAR. Head elongated, ovoidal, separated from the body by a slender neck : snout protruding. Cephalic plates normal. One nasal plate, with the nostril in the centre : one loreal : one anteorbital ; two post-orbitals. Eyes very large. Mouth deeply cleft. Tail slender, between $\frac{1}{2}$ and $\frac{1}{4}$ of total length. Scales all perfectly smooth. Postabdominal scutella bifid : subcaudal all bifid. Color uniform.

SYN. *Chlorosoma*, WAGL. Nat. Syst. der Amph. 1830, 185.

13. CHLOROSOMA VERNALIS, B. & G.— Greensnake.

SPEC. CHAR. Uniform green; darker above, lighter beneath. Dorsal scales in fifteen rows. 138+1, 70, 15, 18, $5\frac{1}{4}$ (New-York).

SYNONYMS.

Coluber vernalis, DEKAY, MSS.— HARL. Journ. Acad. Nat. Sc. Philad. V. 1827, 361; and Med. & Phys. Res. 1835, 124.— STORER, Rep. Rept. Mass. 1839, 224.— HOLBR. N. Amer. Herp. III. 1842, 79, pl. xvii.— DEKAY, N. York Fauna, Rept. 1842, 40, pl. xi. f. 22.— THOMPS. Hist. of Verm. 1842, 117. .
Chlorosoma vernalis, B. & G. l. c. 1853, 108.

This gentle and harmless species, which Dr. DEKAY was the first to introduce to the notice of the scientific world, is generally known as the green or grass-snake. It is quite northern in its distribution, extending from Maine to Wisconsin, and not hitherto found south of Virginia on the Atlantic coast.

GENUS DIADOPHIS, BAIRD & GIRARD.

GEN. CHAR. Head subelliptical, elongated, depressed, distinct from the body. Cephalic plates normal. Two postorbitals, and two anteorbitals. A well-developed loreal. Two nasals; nostril between. Eyes large. Mouth deeply cleft. Body slender, subcylindrical: tail tapering. Scales smooth, disposed in 15 or 17 rows. Postabdominal scutellæ bifid: subcaudal all divided. Unicolor above, and generally with a light ring on the occipital region: abdomen lighter, unicolor or punctate.

SYN. *Diadophis*, B. & G. l. c. 1853, 112.

14. DIADOPHIS PUNCTATUS, B. & G.—Ringnecked-snake.

SPEC. CHAR. A yellowish white occipital ring. Body bluish black above; yellowish orange beneath, with a medial series of spots, sometimes absent. Tail beneath unicolor. Dorsal scales in 15 rows. Eye above the fourth and fifth upper labials. 148+1, 53, 15, 13 $\frac{3}{8}$, 3 (Penn.).

SYNONYMS.

Coluber punctatus, LINN. Syst. Nat. I. 1776, 376.—GM. L. Syst. Nat. ed. xiii. I. iii. 1788, 1089.—HARL. Journ. Acad. Nat. Sc. Philad. V. 1827, 354; and Med. & Phys. Res. 1835, 117.—STORER, Rep. Rept. Mass. 1839, 225.—HOLBR. N. Amer. Herp. 2d ed. III. 1842, 81, pl. xviii.—DEKAY, N.Y. Fauna, III. 1842, :39, pl. xiv. f. 29.

Spilotes punctatus, SWAINS. Nat. Hist. of Fish. Amph. & Rept. II. 1839, 364.

Calamaria punctata, SCHL. Ess. Phys. Serp. Part. descr. 1837, 39.

Diadophis punctatus, B. & G. l. c. 1853, 112.

This beautiful species is common in the mountainous districts of Pennsylvania and Virginia, and extends from Maine to Wisconsin, being also widely distributed in the south. It is frequently found coiled up beneath flat stones, and the fallen bark of logs, in which situations I have sometimes found as many as twenty in a single day. In Texas, and the far west, it is replaced by other allied species.

GENUS CELUTA, BAIRD & GIRARD.

GEN. CHAR. Head elongated, subelliptical, continuous with the body.

Cephalic plates normal : vertical broad. Superciliaries very small. One nasal : nostril in the middle. No anteorbital. Orbit formed chiefly by the loreal, which is large, and slightly by the postfrontals. Scales smooth.

Postabdominal scutellæ bifid : subcaudals divided. Unicolor.

Differs from *Brachyorrhos* in having two pairs of frontals, and smooth scales.

SYN. *Celuta*, B. & G. l. c. 1853, 129

15. CELUTA AMÆNA, B. & G.—Wormsnake.

SPEC. CHAR. Above uniform chestnut-brown, opalescent; light yellow (bright salmon-color in life) beneath. Dorsal scales in 13 rows. 128+1, 80, 13, 11 $\frac{3}{4}$, 1 $\frac{3}{8}$ (Penn.).

SYNONYMS.

Coluber amænus, SAY, Journ. Acad. Nat. Sc. Philad. IV. 1825, 237.—HARR.

Journ. Acad. Nat. Sc. Philad. V. 1827, 355; and Med. & Phys. Res. 1835, 118.

—STOREY, Rep. Rept. Mass. 1839, 226.

Calamaria amæna, SCHL. Ess. Phys. Serp. Part. descr. 1837, 31, pl. i. f. 19 & 20.

—DEKAY, N.Y. Fauna, III. 1842, 49.

Brachyorrhos amænus, HOLBR. N. Amer. Herp. III. 1842, 115, pl. xxvii.

Celuta amæna, B. & G. l. c. 1853, 129.

This curious species resembles in general shape and exterior a large earthworm, more than any other of our serpents. The glistening exterior, the blunt tail, the head smaller than the body, and the reddish color, all tend to heighten the similarity. It is found under dry logs and stones, particularly in mountainous regions, rarely being seen abroad. It is sparingly distributed throughout the United States east of the Missouri.

GENUS STORERIA, BAIRD & GIRARD.

GEN. CHAR. Head subelliptical, distinct from the body. Cephalic plates normal. Loral plate absent. Orbitals, two posterior, one or two anterior. Nasals two, rather large. Body small, scarcely exceeding a foot in length, subcylindrical : tail comparatively short, tapering. Dorsal scales 15 - 17 rows, all carinated. Abdominal scutellæ 120 - 140 ; posterior one bifid : subcaudal, all divided, from 41 to 51 in number. Color brown, with two dorsal dotted lines.

SYN. *Storeria*, B. & G. l. c. 1853, 135.

16. STORERIA DEKAYI, B. & G.—Spotted-snake. .

SPEC. CHAR. One anterior and two posterior orbitals. Dorsal rows 17. Gray or chestnut-brown above, with a clay-colored dorsal band margined by dotted lines. A dark patch on each side of the occipital : a dark bar between this and the eye, and two below the orbit. 128+1, 47, 17, 18, 2 $\frac{5}{8}$ (New-York).

SYNONYMS.

Tropidonotus dekayi, HOLBR. N. Amer. Herp. III. 1842, 53, pl. xiv.—DEKAY, N.Y. Fauna, Rept. 1842, 46, pl. xiv. f. 30.

Tropidonotus ordinatus, STORER, Rep. Rept. Mass. 1839, 223.

Storeria dekayi, B. & G. l. c. 1853, 135.

This snake is exceedingly abundant in the Northern States, ranging from Maine to Wisconsin, and south to Florida and Texas. Indeed no other species has a more extended distribution. It is everywhere associated with the *S. occipito-maculata*. In New-York, it is very abundant along the shores of Lake Champlain.

17. STORERIA OCCIPITO-MACULATA, B. & G.

SPEC. CHAR. Orbitals, two anterior, two posterior. Dorsal scales in 15 rows. Above gray or chestnut-brown, sometimes with a paler vertebral line : beneath red, or salmon-color. Three distinct light-colored spots behind the head, and a smaller one on the fourth or fifth upper labial. 124+1, 43, 15, 9 $\frac{1}{2}$, 1 $\frac{3}{4}$ (New-York).

SYNONYMS.

- Tropidonotus occipito-maculatus*, STORER, Rep. Rept. Mass. 1839, 230. }
Coluber venustus, HALLOW. Proc. Acad. Nat. Sc. Philad. III. 1847, 274; and IV.
 1849, 245.
Storeria occipito-maculata, B. & G. 1. c. 1853, 137.

Nostril almost entirely in the prenasal plate, in some cases the postnasal not entering at all into it. Five to six upper labials, increasing in length posteriorly : lower labials six to seven, similarly constituted. Vertical plate hexagonal, shield-shaped. Muzzle rather broad. Eyes larger than in *S. dekayi*.

Color above light chestnut-brown, sometimes chestnut-gray, at others olivaceous. A paler vertebral line from occiput to end of tail, about three scales in width. On each side of this may be seen a series of minute brown spots, produced by the brown bases of the scales in the third row on each side from the central series. Sometimes the brown covers the whole scale, and gives rise to two dorsal lines : at others it is almost entirely wanting ; and this, connected as it generally is with a less distinct vertebral band, gives the impression of a uniform tint above. Upper margin of the exterior dorsal lines brighter yellowish, giving the effect in some cases of a lateral narrow light line. Abdomen, in life, salmon-color ; in alcohol, whitish yellow, with the sides finely mottled with dark brown, sometimes obsolete, at others constituting very distinct bands : these generally do not encroach upon the dorsal scales. Occasionally, however, the middle of the exterior row of scales exhibits a dark stripe. Immediately behind the occipital plates, and on the median line, is seen a dull salmon-colored blotch ; on each side of which, over the angle of the jaws, is a similar smaller one : the intervals between these blotches sometimes darker. A small salmon-colored spot on the fourth or fifth upper labial, behind the orbit. Plates on the top of the head blotched with darker. Lower jaw minutely dotted with brown.

DESCRIPTION OF A LIVING SPECIMEN CAUGHT AT WESTPORT (N. Y.), AUGUST 1847.—“ Iris dark chestnut, rather lighter above and externally. General color above dull chestnut-brown. Attentively examined, however, when wet, there is seen a faint dorsal stripe of lighter color, bordered by a line on each side of darker, which fades off to the abdominal scutellæ until the color is the same as the dorsal line, or even lighter. Behind the head are three light yellowish brown occipital spots. Whole under parts, except the chin or throat, bright brick-red : chin and throat white, mottled finely with gray and black like pepper and salt. An irregularly defined stripe of the same mottling along the sides from head to anus, crossing the abdominal scutellæ near the outside.”

It is not a little remarkable that this beautiful serpent, with its striking colors, its great abundance and extensive range, should so long have escaped the notice of naturalists. It was entirely unknown to Dr. HOLBROOK, the author of the great work on North-American Herpetology, as well as to Dr. DEKAY, by whom it was not, of course, included in the Fauna of New-York. As already stated, my first acquaintance with it was through Dr. AVERY J. SKILTON of Troy, who showed me a living specimen in the summer of 1847. I subsequently found it common on Lake Champlain, and have since seen numerous specimens from all parts of the United States east of the Missouri river. Associated everywhere with *S. dekayi*, it occurs in Texas, Louisiana, Florida, &c., apparently in as great abundance as further north, where it extends from Maine to Wisconsin.

The first notice of this species was given by Dr. STORER, in the Report of the Reptiles of Massachusetts, 1839, where it is described under the name of *Tropidonotus occipito-maculatus*. A specimen from Lake Superior was subsequently described as *Coluber venustus* by Dr. HALLOWELL. Hitherto it has not formally been introduced as an inhabitant of New-York, although in this State apparently reaching its maximum of abundance.

