

LIBRARY
UNIVERSITY of KENTUCKY

GEOLOGICAL SURVEY OF ALABAMA
WALTER B. JONES, PH. D., STATE GEOLOGIST

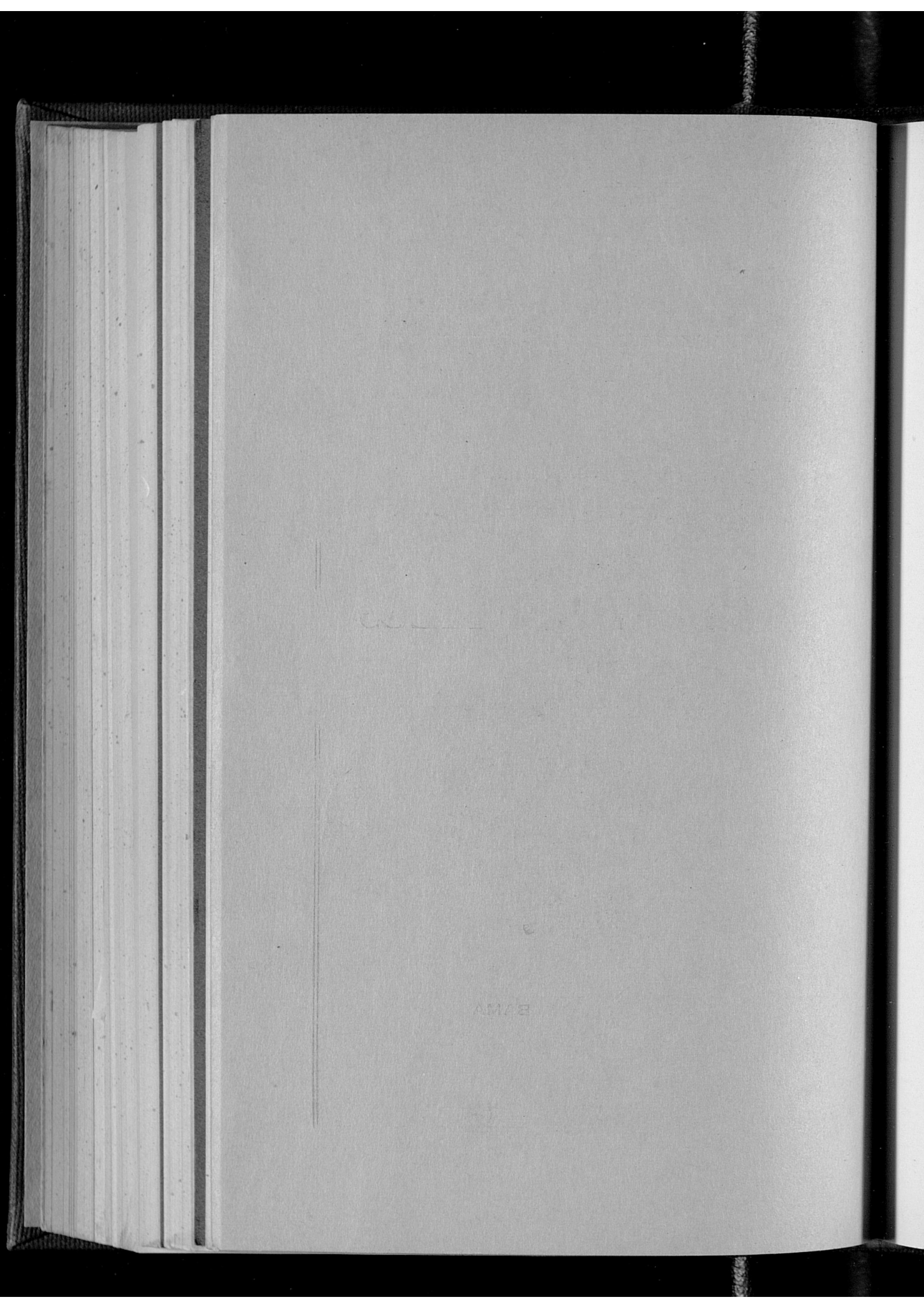
MUSEUM PAPER NO. 11
ALABAMA MUSEUM OF NATURAL HISTORY

ALABAMA REPTILES

BY
WILLIAM L. HALTOM



UNIVERSITY, ALABAMA
1931



GEOLOGICAL SURVEY OF ALABAMA

WALTER B. JONES, PH. D., STATE GEOLOGIST

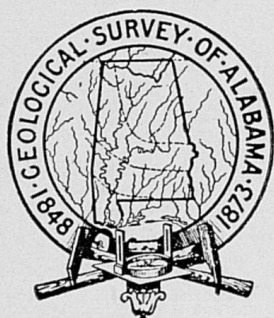
MUSEUM PAPER NO. 11

ALABAMA MUSEUM OF NATURAL HISTORY

ALABAMA REPTILES

BY

WILLIAM L. HALTOM



UNIVERSITY, ALABAMA

1931

THE WILSON PRINTING COMPANY
MONTGOMERY, ALA.

LETTER OF TRANSMITTAL

Hon. B. M. Miller,
Governor of Alabama,
Montgomery, Alabama.
Dear Sir:

I have the honor to transmit herewith a report on Alabama Reptiles, by William L. Haltom, Curator of the Museum, with the request that it be printed as Museum Paper No. 11, of the Alabama Museum of Natural History.

Very respectfully,

WALTER B. JONES,
State Geologist.

University, Alabama,
January 6, 1931.

GEOLOGICAL SURVEY CORPS

WALTER B. JONES, A.B., M.A., Ph.D.....*State Geologist*
 JELKS BARSDALE, B.S., M.S.....*Staff Geologist*
 GEORGE I. ADAMS, D.Sc.....*Geologist*
 ROBERT S. HODGES, D.Sc.....*Chemist*
 ELIZABETH L. JENNINGS, A.B.....*Secretary*

ALABAMA MUSEUM OF NATURAL HISTORY CORPS

WALTER B. JONES, A.B., M.A., Ph.D.....*Director*
 WILLIAM L. HALTOM, A.B., M.S.....*Curator*
 DAVID L. DEJARNETTE, B.S.....*Assistant Curator*
 TRUMAN H. ALDRICH, SR., M.E., D.Sc.....*Paleontology*
 FRANCES CRAWFORD FULTON.....*Secretary*

BOARD OF REGENTS

COL. R. A. MITCHELL, Birmingham.....*Chairman*
 ERSKINE RAMSEY, Birmingham.....*Vice-Chairman*
 WALTER B. JONES, University.....*Secretary*

T. H. Aldrich, Birmingham
 E. F. Allison, Bellamy
 James A. Anderson, University
 J. L. Andrews, Sheffield
 Morris Bush, Birmingham
 George Gordon Crawford, Birmingham
 Frank H. Crockard, Woodward
 George H. Denny, University
 Samuel L. Earle, Birmingham
 Sam Friedman, Tuscaloosa
 Mrs. W. F. Garth, Huntsville
 Chas. B. Glenn, Birmingham
 R. J. Griffin, Moundville
 William L. Haltom, University
 Victor Hanson, Birmingham

Robert Jemison, Jr., Birmingham
 John L. Kaul, Birmingham
 H. P. Ljoding, Mobile
 Hugh Morrow, Birmingham
 Lindsey C. Morton, Birmingham
 Daniel Pratt, Prattville
 Henry M. Pratt, Columbus, Miss.
 Mrs. Julia A. Pratt, Prattville
 Ross C. Smith, Birmingham
 Oliver D. Street, Birmingham
 Theodore Swann, Birmingham
 E. M. Tutwiler, Jr., Birmingham
 Temp'le W. Tutwiler, Birmingham
 George B. Ward, Birmingham

COMMITTEE ON DEPARTMENT PUBLICATIONS

HIS EXCELLENCY B. M. MILLER, *Governor of Alabama*
 HON. JOHN BRANDON, *Secretary of State*
 DR. WALTER B. JONES, *State Geologist*

Geologist
Geologist
Geologist
Chemist
Secretary

PS

Director
Curator
Curator
Herpetology
Secretary

Chairman
Chairman
Secretary

m

ss.

n

m



To My Friend
Mr. H. P. Löding
of
Mobile, Alabama
Who has done more for Herpetology and Entomology
than any man in the South

TABLE OF CONTENTS

	<i>Page</i>
Introduction	vi
Key for classification of snakes.....	12
Class Reptilia	13-142
Order Squamata (Snakes only, lizards pp. 109-120).....	13-103
Suborder Serpentes or Ophidia (snakes).....	13-103
Family Colubridae	14-89
Family Elapidae	90
Family Crotalidae (Poisonous snakes).....	92-103
Order Loricata	105-108
Family Crocodylidae	105-108
Order Squamata (Lizards only, snakes pp. 13-103).....	109-120
Suborder Sauria	109-119
Family Iguanidae	110-112
Family Anguidae	113-114
Family Teiidae	115-116
Family Scincidae	117-119
Order Testudinata	121-142
Family Kinosternidae	122-124
Family Chelydridae	125-138
Family Cheloniidae.....	139-141
Family Trionychidae	141-142
Index	143-145

LIST OF PLATES

<i>Plate</i>	<i>Page</i>	<i>Plate</i>	<i>Page</i>
1. <i>Caryophis amoemus</i>	15	20. <i>Storeria dekayi</i>	74
2. <i>Abastor erythrogrammus</i>	17	21. <i>Storeria occipito-maculata</i> ...	76
3. <i>Farancia abacura</i>	19	22. <i>Virginia valeriae</i>	79
4. <i>Diadophis punctatus</i>	20	23. <i>Potamophis striatulus</i>	82
5. <i>Heterodon contortrix</i>	23	24. <i>Thamnophis sauritus</i>	84
6. <i>Liopeltis vernalis</i>	26	25. <i>Thamnophis sirtalis sirtalis</i> ..	86
7. <i>Opheodrys aestivus</i>	28	26. <i>Thamnophis sirtalis sirtalis</i> ..	87
8. <i>Coluber constrictor constrictor</i>	31	27. <i>Micrurus fulvius</i>	91
9. <i>Coluber flagellum flagellum</i> ..	33	28. <i>Agkistrodon mokasen</i>	93
10. <i>Elaphe guttata</i>	35	29. <i>Agkistrodon mokasen</i>	94
11. <i>Elaphe obsoleta confinis</i>	39	30. <i>Sistrurus catenatus catenatus</i> ..	97
12. <i>Elaphe obsoleta confinis</i> and <i>Lampropeltis getulus holbrooki</i> ..	40	31. <i>Crotalus horridus</i>	102
13. <i>Drymarchon corais couperi</i>	42	32. <i>Alligator mississippiensis</i>	108
14. <i>Pituophis melanoleucus</i>	45	33. <i>Kinosternon subrubrum</i> <i>subrubrum</i>	123
15. <i>Pituophis melanoleucus</i>	46	34. <i>Chelydra serpentina</i>	126
16. <i>Leimadophis flavilatus</i>	49	35. <i>Chelydra serpentina</i>	128
17. <i>Lampropeltis getulus</i> <i>holbrooki</i>	54	36. <i>Terrapene major</i>	130
18. <i>Cemophora coccinea</i>	59	37. <i>Pseudemys mobiliensis</i>	134
19. <i>Natrix sipedon fasciata</i>	69	38. <i>Dierochelys reticularia</i>	138
		39. <i>Amyda ferox</i>	140

LIST OF TEXT FIGURES

<i>Page</i>	<i>Figure</i>	<i>Page</i>	<i>Figure</i>	<i>Page</i>
vi				
12				
13-142				
13-103				
13-103				
14-89				
90				
92-103				
105-108				
105-108				
109-120				
109-119				
110-112				
113-114				
115-116				
117-119				
121-142				
122-124				
125-138				
139-141				
141-142				
143-145				
<i>Page</i>				
74				
76				
79				
82				
84				
86				
87				
91				
93				
94				
97				
102				
108				
123				
126				
128				
130				
134				
138				
140				

3	1. Head plates for classification	70	30. <i>Natrix sipedon erythrogaster</i>
14	2. <i>Caryophis amoemus</i>	72	31. <i>Natrix taxispilota</i>
16	3. <i>Abastor erythrogrammus</i>	75	32. <i>Storeria dekayi</i>
18	4. <i>Farancia abacura</i>	77	33. <i>Storeria occipito-maculata</i>
21	5. <i>Diadophis punctatus</i>	78	34. <i>Virginia elegans</i>
22	6. <i>Heterodon contortrix</i>	80	35. <i>Virginia valeriae</i>
25	7. <i>Heterodon simus</i>	81	36. <i>Potamophis striatulus</i>
27	8. <i>Liopeltis vernalis</i>	83	37. <i>Thamnophis sackeni</i>
29	9. <i>Ophedrys aestivus</i>	85	38. <i>Thamnophis sauritus</i>
30	10. <i>Coluber constrictor constrictor</i>	87	39. <i>Thamnophis sirtalis sirtalis</i>
32	11. <i>Coluber flagellum flagellum</i>	89	40. <i>Tantilla coronata</i>
34	12. <i>Elaphe guttata</i>	90	41. <i>Micrurus fulvius</i>
36	13. <i>Elaphe obsoleta obsoleta</i>	92	42. <i>Agkistrodon mokasen</i>
38	14. <i>Elaphe obsoleta confinis</i>	95	43. <i>Agkistrodon piscivorus</i>
43	15. <i>Drymarchon corais couperi</i>	96	44. <i>Sistrurus catenatus catenatus</i>
44	16. <i>Pituophis melanoleucus</i>	98	45. <i>Sistrurus miliarius</i>
48	17. <i>Leimadophis flavilatus</i>	99	46. <i>Crotalus adamanteus</i>
50	18. <i>Lampropeltis elapsoides</i>	101	47. <i>Crotalus horridus</i>
51	19. <i>Lampropeltis getulus getulus</i>	106	48. <i>Crocodylus acustus</i>
53	20. <i>Lampropeltis getulus holbrooki</i>	107	49. <i>Alligator mississippiensis</i>
57	21. <i>Lampropeltis rhomboidalis</i>	110	50. <i>Anolis carolinensis</i>
58	22. <i>Cemophora coccinea</i>	111	51. <i>Sceloporus spinosus floridanus</i>
60	23. <i>Natrix clarkii</i>	112	52. <i>Sceloporus undulatus</i>
61	24. <i>Natrix cyclopium</i>	114	53. <i>Ophisaurus ventralis</i>
63	25. <i>Natrix kirtlandii</i>	116	54. <i>Cnemidophorus sexlineatus</i>
64	26. <i>Natrix rhombifera</i>	117	55. <i>Leilopisma laterale</i>
66	27. <i>Natrix rigida</i>	118	56. <i>Plestiodon fasciatus</i>
67	28. <i>Natrix septemvittata</i>	119	57. <i>Plestiodon pluvialis</i>
68	29. <i>Natrix sipedon fasciata</i>		

INTRODUCTION

With the modern discoveries and revelations of science we must appreciate the many factors that enter into the balance of our complex existence. No group can exist unto itself. Until comparatively a few years back little was thought of the bee except as a honey producer. Now we realize its economic position as a means of pollination of certain plants. Throughout the ages snakes have been looked upon with hatred and a great deal of superstition. We must now, however, admit that they play a definite part in the control of rodent and insects. Various biology departments have placed a specific value on birds that also serve this purpose. We may quite as easily place a value on each snake, for they can reach many insects inaccessible to birds.

This publication is submitted in the hope that it may increase the interest in these little known forms of life, and that some light may be thrown upon their distribution.

This report is based on the *Preliminary Catalogue of Alabama Reptiles* by H. P. Löding, to whom goes the credit for most important work done both in the State and in the entire South, on this group. Specimens collected by the Museum Staff and others since the publication of this former list, have been included in this work.

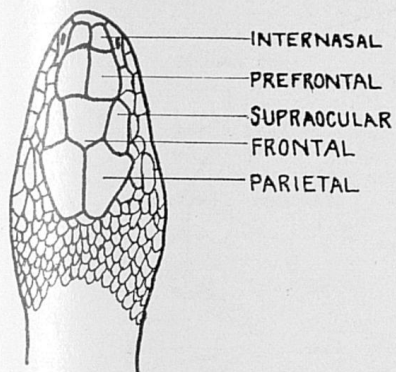
This is the first report on Alabama reptiles that attempts more than a listing of the species. In this report it has been attempted to so describe the various species that any future specimens may be definitely classified. The descriptions are based upon species in the Alabama State Museum, University, Alabama; the *Report on Crocodilians, Lizards and Snakes* by E. D. Cope; *The Reptile Book* by Raymond Ditmars; numerous publications by C. S. Brimley for the *Genus Lampropeltis*, the report by Dr. Frank N. Blanchard; and *Herpetology of Missouri* by Julius Hurter, Sr. The nomenclature is that of Stejneger and Barbour, as nearly as possible. Obsolete and former nomenclature is given under this classification when possible. The diagrams listed "After Cope" are from the publication of Dr. E. D. Cope on *Crocodilians, Lizards and Snakes*, published in 1898 Annual Report of the Smithsonian Institution.

ence we
lance of
. Until
e bee ex-
position
the ages
deal of
y play a
biology
so serve
on each
rds.
may in-
and that

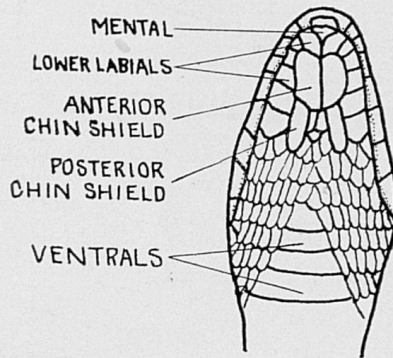
of Ala-
For most
e South,
caff and
includ-

attempts
been at-
e speci-
e based
ty, Ala-
y E. D.
s publi-
e report
i by Ju-
nd Bar-
nclature
agrams
D. Cope
Annual

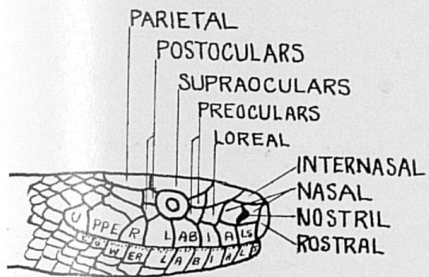
A KEY TO THE
SUBORDER SERPENTES
OR
SNAKES



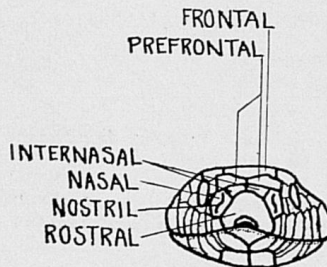
Top



Bottom



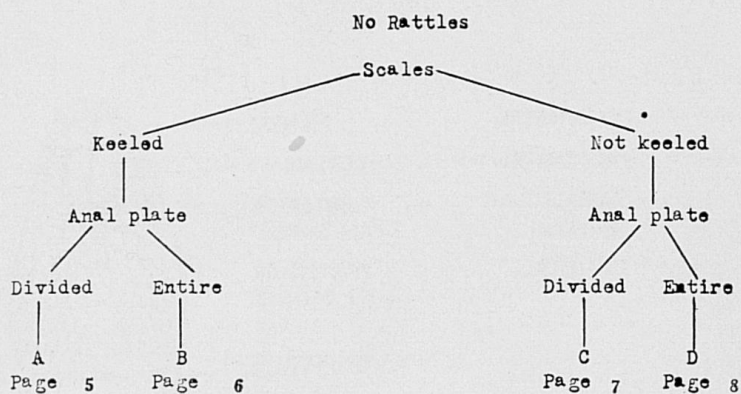
Side



Front

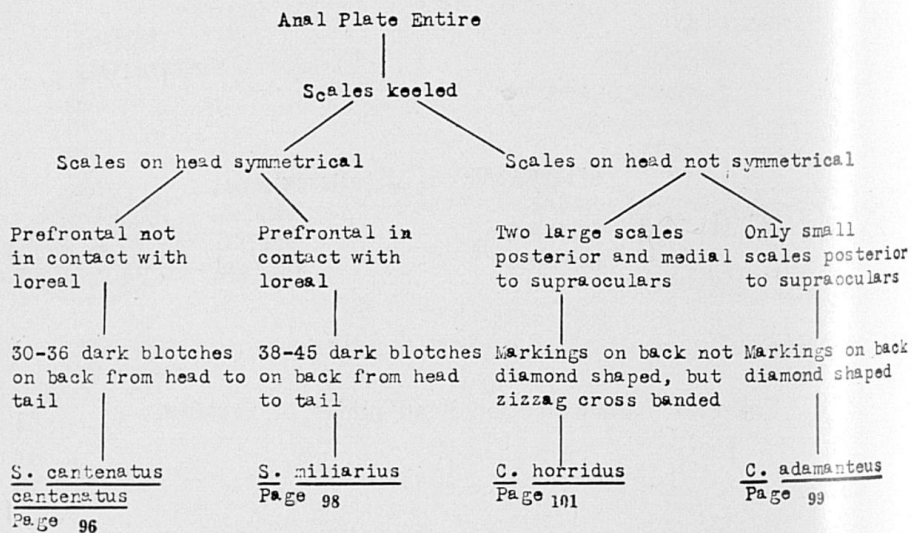
Figure 1. Classification head plates of reptiles.

KEY



With Rattles

Fangs in upper jaw, pit between eyes, anterior caudals entire.

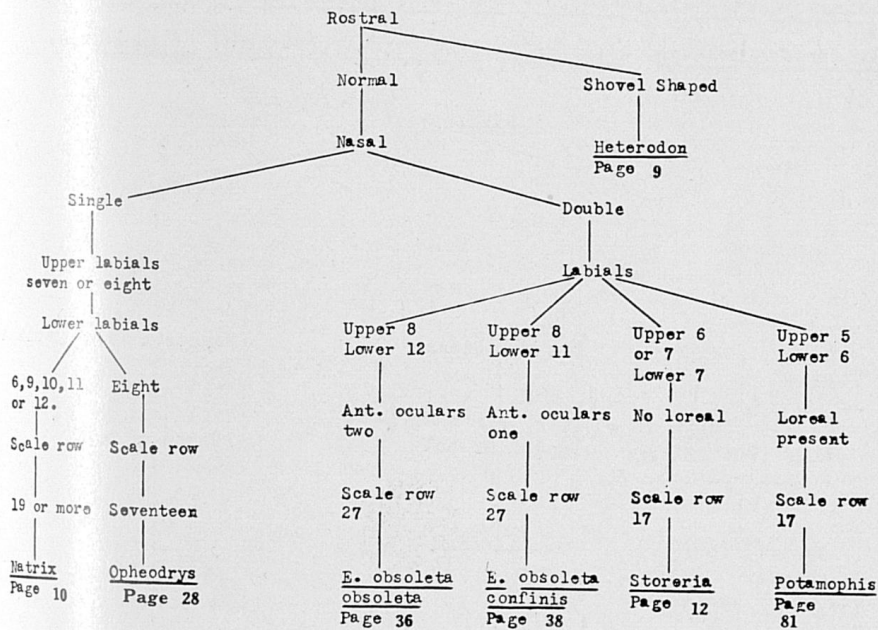


ALABAMA REPTILES

Group A

Scales Keeled and Anal Plate Divided

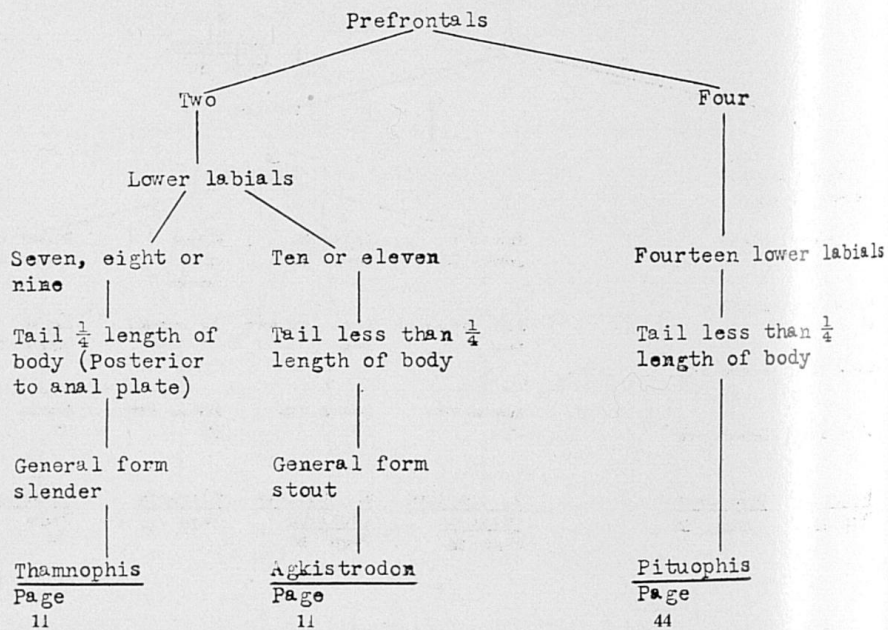
In this group there are: Matrix, Potamophis, Opheodrys, Heterodon, Elaphe and Storeria.



Group B

Anal Plate Entire and Scales Keeled

In this group there are three genus or a total of six species:
Thamnophis sackeni, Thamnophis sauritus, Thamnophis sirtalis sirtalis,
Agkistrodon mokasen, Agkistrodon piscivorous, Pituophis melanoleucus.

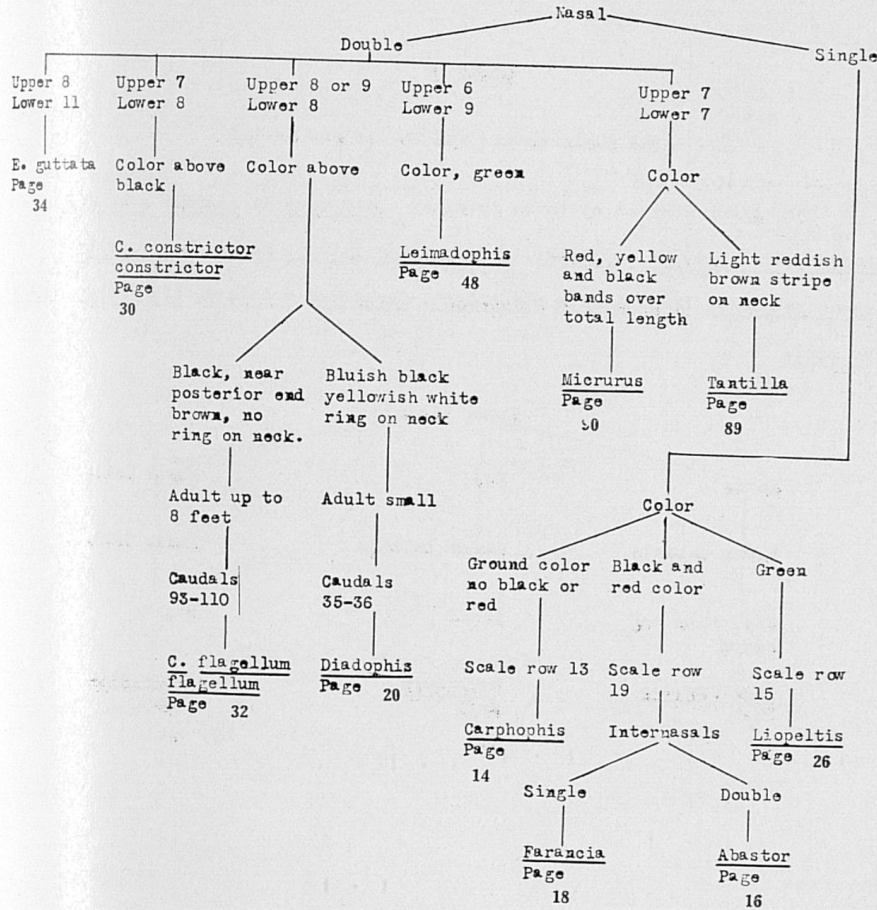


ALABAMA REPTILES

Group C

Anal Plate Divided and Scales Not Keeled

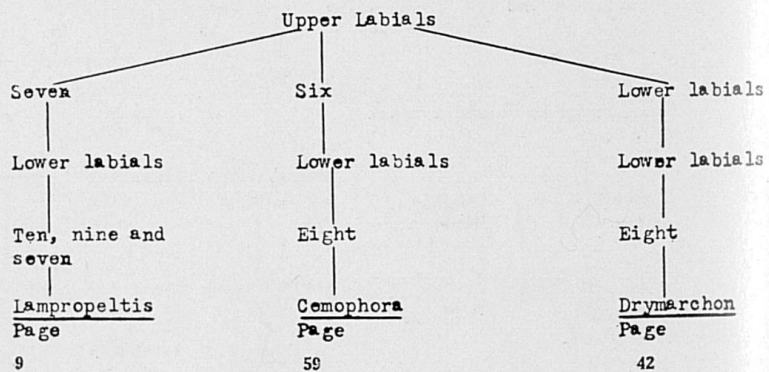
In this group there are: Virginia, Tantilla, Farancia, Leimadophis, Coluber, Carphophis, Diadophis, Liopeltis, Micrurus and Abastor.



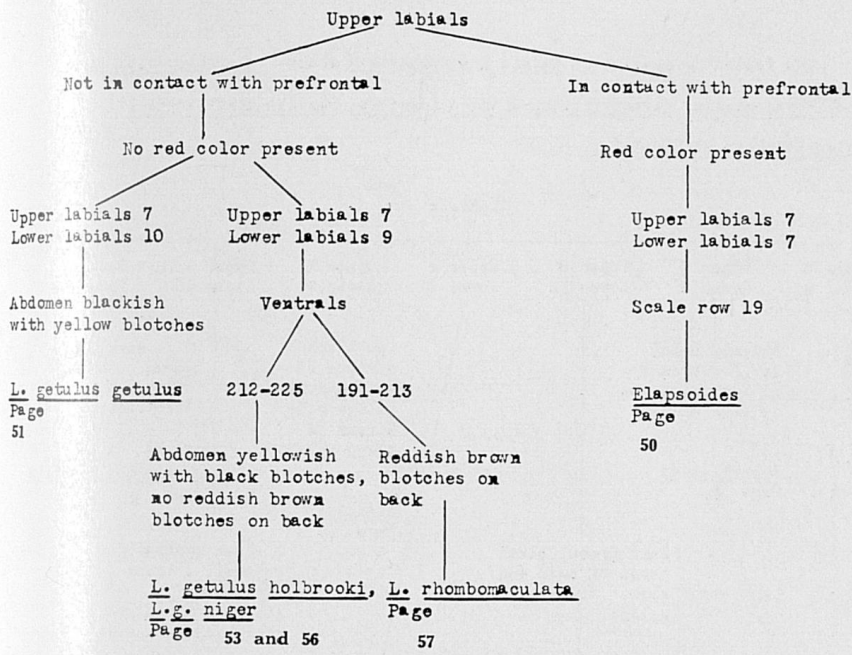
Group D

Anal Plate Entire and Scales Not Keeled

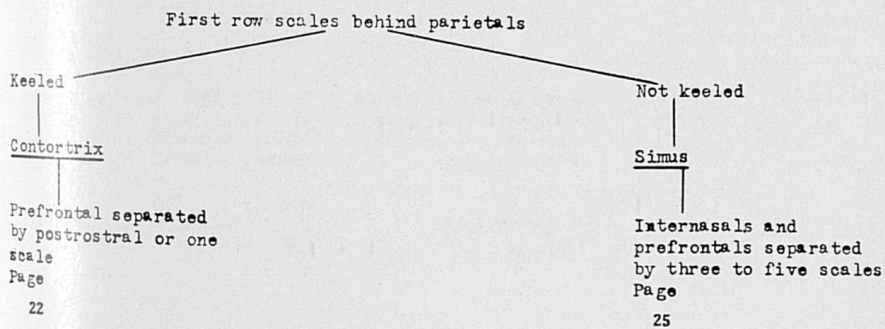
This group consist of seven species: Lampropeltis getulus getulus, Lampropeltis getulus holbrooki, Lampropeltis getulus niger, Lampropeltis rhombomaculata, Lampropeltis elapsoides, Cemophora coccinea, Drymarchon corais couperi.



Lampropeltis

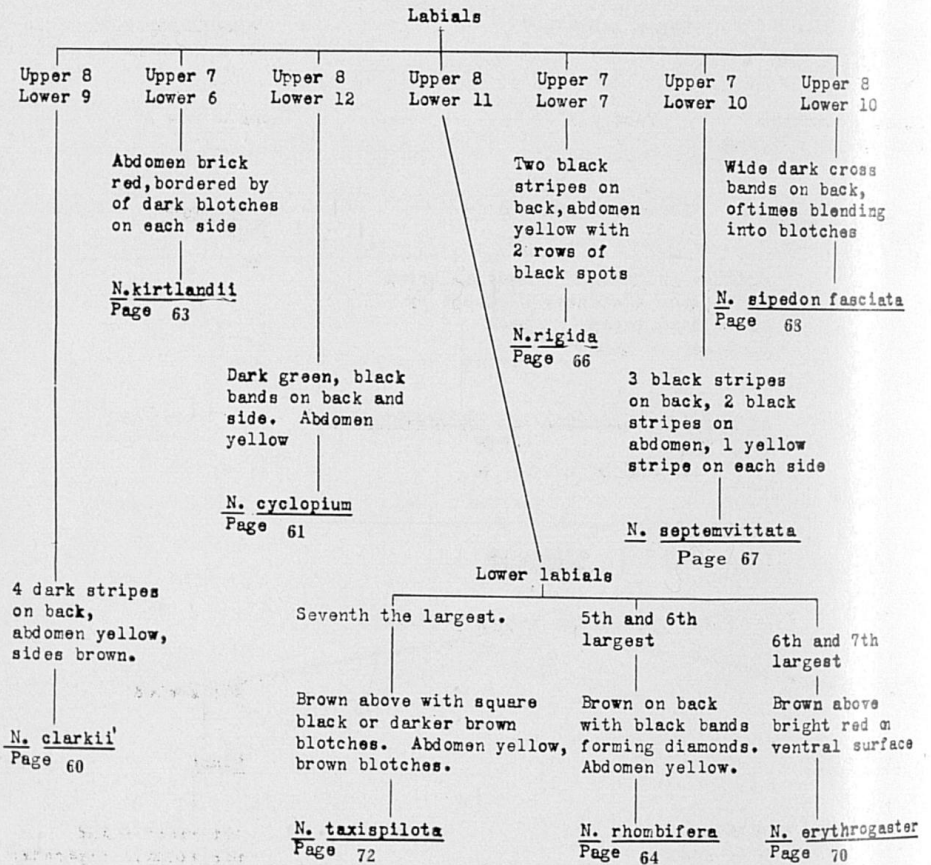


Heterodon

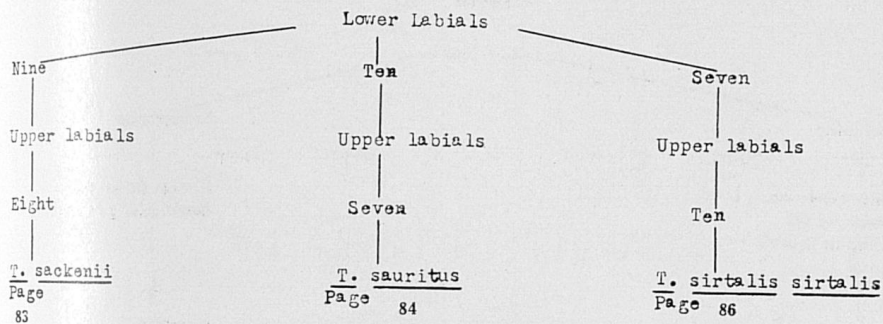


Matrix

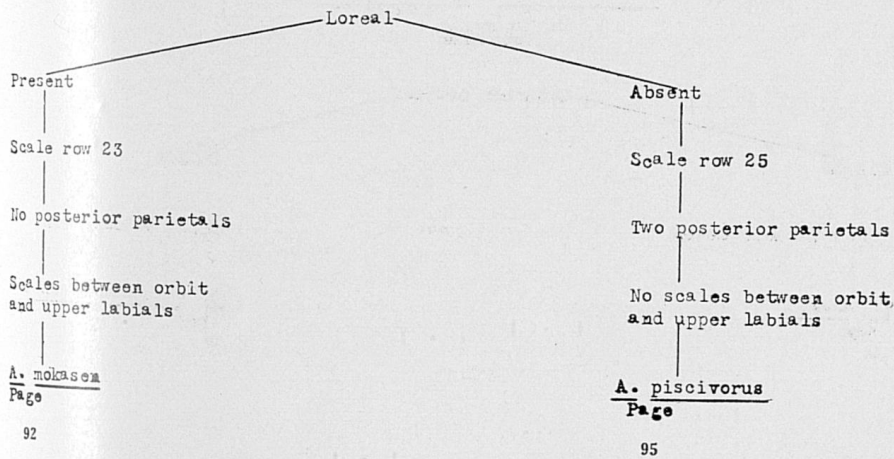
The following species of Matrix are found in Alabama: clarkii, cyclopium, rhombifera, rigida, septemvittata, Sipdeon fasciata, Sipdeon erythrogaster, taxispilota and kirtlandii.

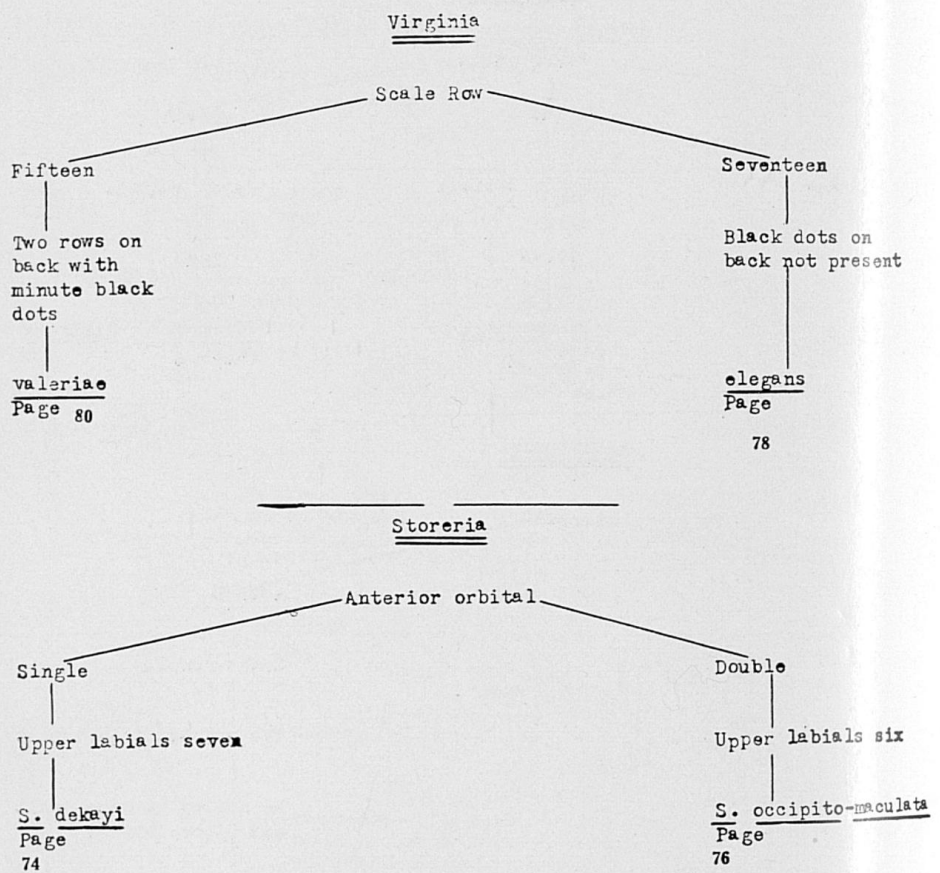


Thamnophis



Agkistrodon





ent

CLASS REPTILIA

ORDER SQUAMATA

SUBORDER SERPENTES OR OPHIDIA

six

culata

Family COLUBRIDAE

Genus CARPHOPHIS, Gervais

Carphophis amoenus (Say) Gervais

Worm snake or Ground snake

Carphophiops amoenus, Cope; *Coluber amoenus*; *Celuta helenae*;
Carphophis helenae; *Celuta vermis*; *Brachyorrhos amoenus*; *Calamaria*
amoena.

Anal plate, divided	Upper labials, five	Rostral, very broad
Anterior chin shields, two	Largest upper labials, fifth	Parietal, large
Posterior chin shields, two, smaller than an- terior	Loreal, one	Postoculars, quad- rangua
Frontal, hexagonal	Mental, small	Preoculars, none
Prefrontals, two	Nasal, single	Scales, keeled
Lower labials, six	Internasals, two	Scale row, thirteen
Largest lower labials, third	Nostril, middle of nasal	Ventrals, 112-134

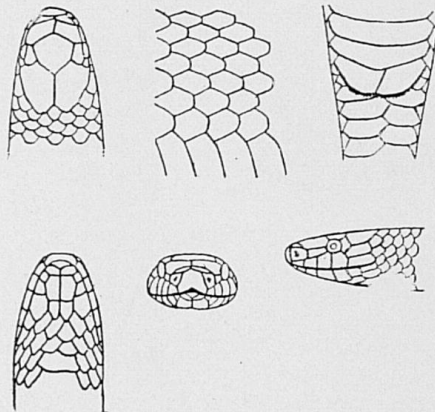
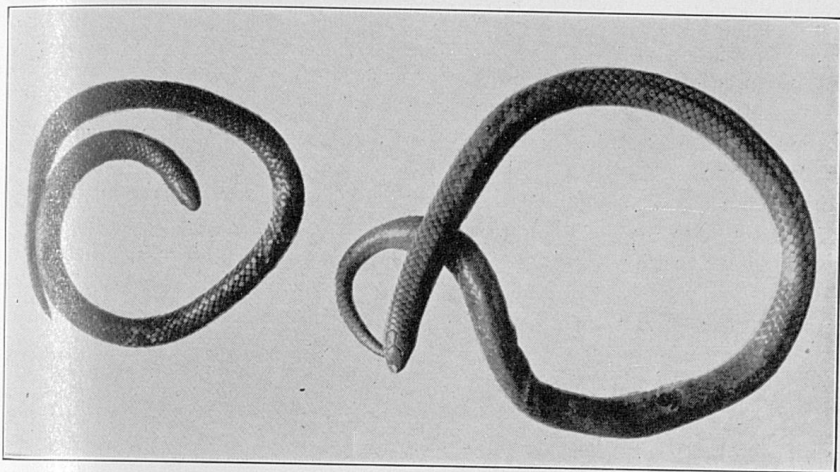


Figure 2. *Carphophis amoenus* (Say) Gervais
 (After Cope)

On
 nut bro
 ings.
 Ha
 habits.
 inches,
 seeking
 Ovi
 Dis
 Indiana
 Ala
 of the S
 the Coa

PLATE 1



Carphophis amoenus, (Say) Gervais
Preserved specimens in the Museum.

On the dorsal surface in life the color is a beautiful opalescent chestnut brown. The ventral surface is a flesh colored pink. No bands or markings.

Habits: Although a very common snake it is seldom seen owing to its habits. This little snake, which seldom attains a length of more than seven inches, lives under rocks, leaves and logs. It burrows in the soft grounds seeking worms and insects. For this reason it is very helpful to the farmer.

Oviparous, generally laying three to five eggs.

Distribution: Connecticut to Florida, westward to Ohio, Illinois and Indiana.

Alabama: This snake is well distributed throughout the northern part of the State and as far south as Montgomery. It is very seldom found in the Coastal Plains.

Genus: ABASTOR, Gray

Abastor erythrogrammus (Daudin) Gray*Coluber erythrogrammus*, Daudin

Rainbow snake

Anal plate, divided	Loreal, narrow, forms outer portion of orbit	Postoculars, two
Caudals, thirty-seven to forty-one	Mental, two pair	Preoculars, two
Frontal, one	Nasal, single	Supraoculars, two
Prefrontals, two	Internasals, two	Scales, not keeled
Lower labials, seven	Nostril, in middle of nasal	Scale row, nineteen
Upper labials, seven	Rostral, very broad	Ventrals, 179-183

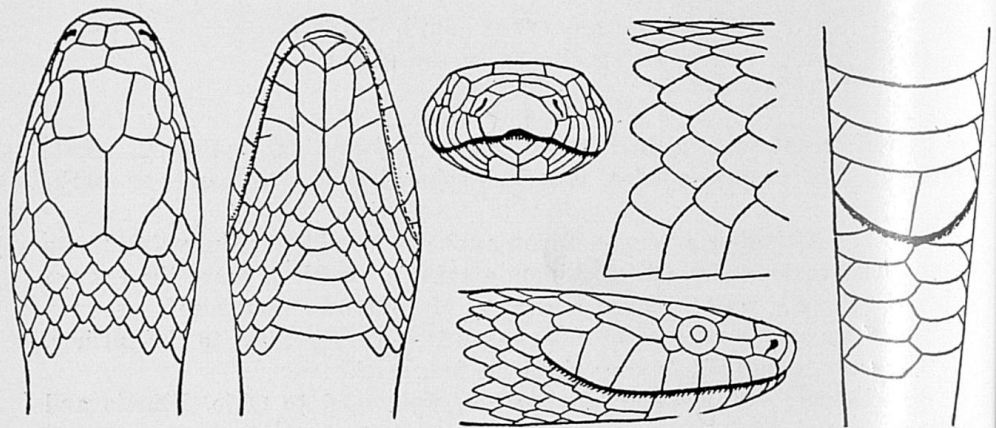
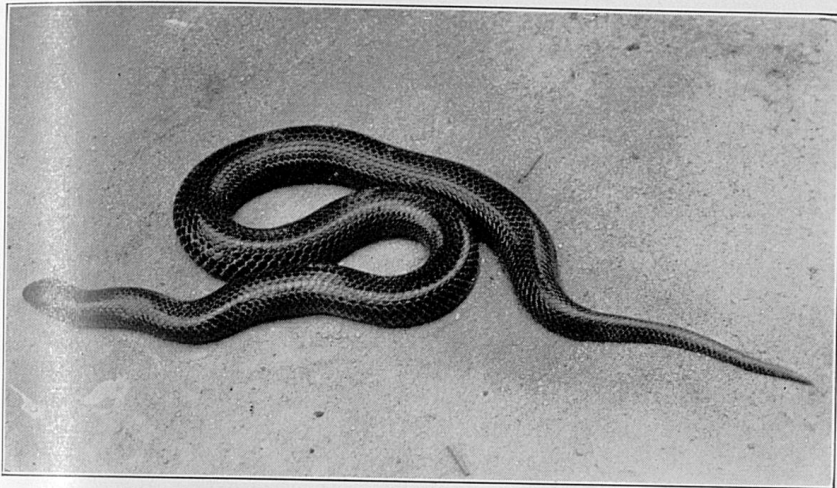


Figure. 3. *Abastor erythrogrammus* (Daudin) Gray
(After Cope)

The
Americ
tion, of
The
County.
This sn
caught
easy.
rower,
few mir
they pre
sharp, t
been ca
side of
Dis
Ala
wider sp

PLATE 2



Abasator erythrogrammus, Gray
From live specimen in the Museum.

Abastor erythrogrammus

The rainbow snake is one of, if not the, most beautiful species in America. This snake is a thing of beauty, with a most artistic color decoration, of stripes of red and black going the entire length of the body.

There are five official records of the snake being caught in Tuscaloosa County. It has been the author's fortune to have caught three of them. This snake is regarded as a burrower, but strange to say two of those caught in this county had fish in the mouth, thus making the catch very easy. The others were found in water. Thus, although normally a burrower, it has aquatic tendencies. This is a very docile snake and after a few minutes of its captivity will make no effort to bite. When first caught they press the tail against the captor, and as the tip of the tail is hard and sharp, they can make it distinctly felt. For this reason it has erroneously been called "the stinging snake." There is no sign of a stinger and outside of the mechanical pressure exerted there is no pain.

Distribution: Virginia to Florida.

Alabama: Tuscaloosa, Mobile and Baldwin Counties. It is perhaps wider spread but official records are lacking.

Genus: FARANCIA, Gray

Farancia abacura (Holbrook) Cope*Coluber abacurus*, Holbrook; *Farancia drummondi*, Gray
Horn snake, Hoop snake, Mud snake, Thunder snake

Anal plate, divided	Loreal, present	Postoculars, two
Caudals, forty-seven	Mental, small	Preoculars, none
Frontal, one	Nasal, single	Supraoculars, two
Prefrontals, two	Internasals, single	Scales, not keeled
Lower labials, eight	Nostril, visible from above	Scale row, nineteen
Upper labials, seven	Rostral, broad	Ventrals, 173-175

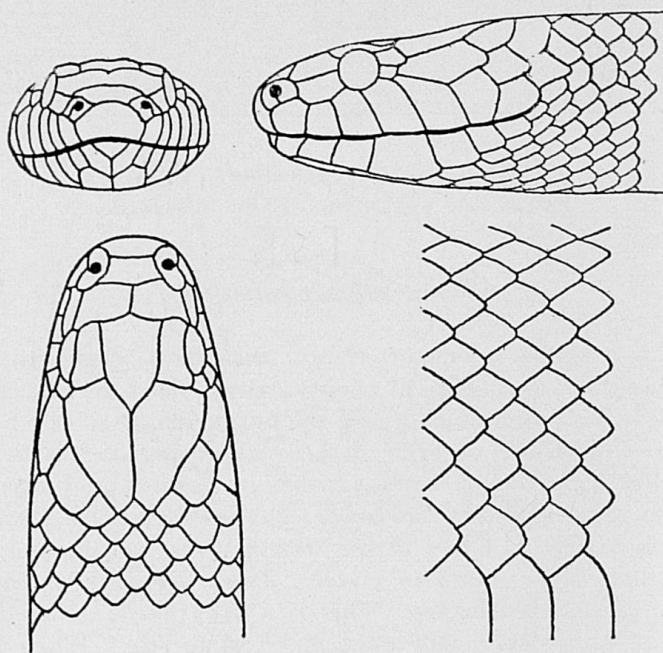
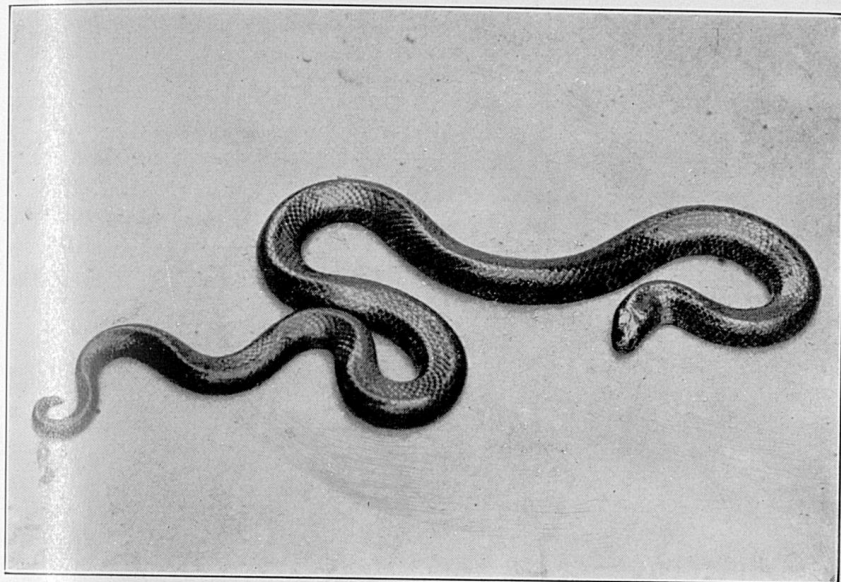


Figure 4. *Farancia abacura* (Holbrook Cope)
(After Cope)

Th
and the
the side
back an
Ha
marsh
worms
Th
which,
poisono
is thoug
stepped
three ti
are wh
stingers
docile a

PLATE 3



Farancia abacura (Holbrook) Cope
From live specimen in the Museum.

The outstanding coloration of this snake is a jet black on the back and the stomach a beautiful deep red, with the red extending in blotches up the side to about the fourth row of the scales. The black streaks from the back are about three scales wide, the red about two.

Habits: This snake leads a subterraneous life, burrowing in wet marshes and for this reason the eyes are poorly developed. It feeds on worms and other insects and should be classed as beneficial to the farmer.

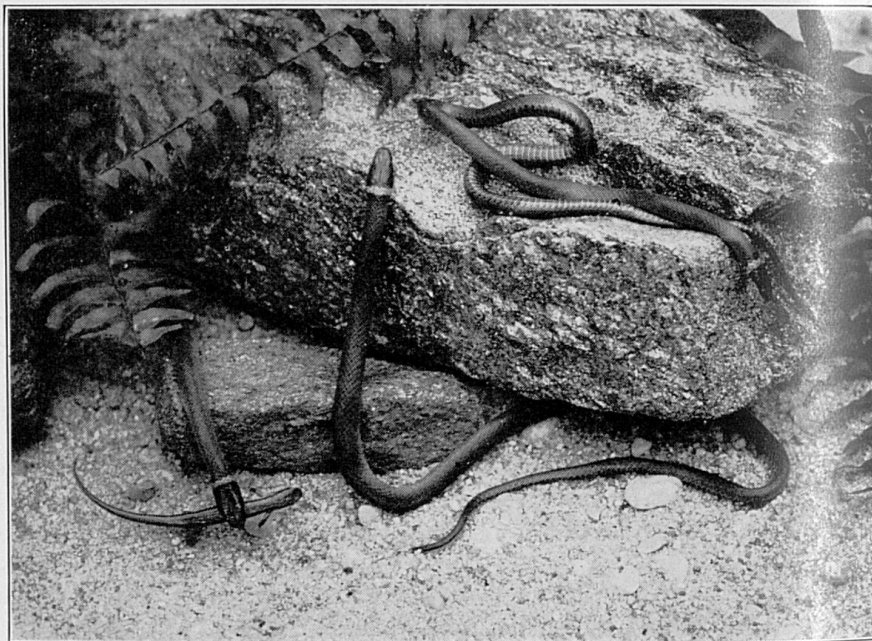
This, like the Abastor, is one of the beautiful snakes of this State, which, due to fantastic tales, has often been branded as dangerous and poisonous. This snake has coarse heavy scales on the end of its tail. It is thought by some that this is a stinger. I heard a man tell that his horse stepped on the head of one of these snakes and that it struck the horse three times with its tail and the horse died in a few minutes. These stories are wholly unfounded. I have handled many of these and none have had stingers. They attempt to prick the skin but never succeed. It is very docile and will not attempt to bite.

Genus: DIADOPHIS

Diadophis punctatus, (Linne) Baird and Girard*Coluber punctatus*, Linne*Diadophis occipitalis*, Cope*Coronella punctata*, Boulenger

Anal plate, divided	Loreal, square	Postoculars, two
Caudals, 36-56	Mental, two pair	Preoculars, two
Frontal, one	Nasals, two	Supraoculars, two
Prefrontals, two	Internasals, two	Scales, not keeled
Lower Labials, eight	Nostril, between nasals	Scale row, 15-17
Upper labials, eight	Rostral, normal	Ventrals, 142-158

PLATE 4



Diadophis punctatus, (Linne) Baird and Girard
Used through courtesy of New York Zoological Society.

De
body at
over on
Ha
among
have an
small s
Ov
other s
Dis
United
Ala

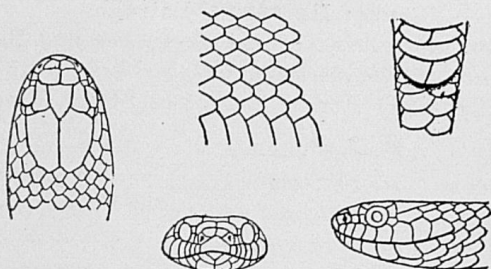


Figure 5. *Diadophis punctatus* (Linne) Baird and Girard
(After Cope)

Description: Dorsal surface gray. A bright yellow ring encircles the body at the neck. Ventral surface yellow. Total length of adult scarcely over one foot.

Habits: This species is seldom seen due to the fact that it burrows among the loose soil and leaves, and hides beneath stones and logs. They have an enormous appetite and feed upon ants and other insects, frogs and small snakes.

Oviparous, but the eggs hatch in a very short time, much quicker than other snake eggs.

Distribution: This snake is found throughout the entire Eastern United States.

Alabama: It is perhaps distributed over the entire State.

Genus: HETERDON, Latreille

Heterodon contortrix (Linne) Stejneger and Barbour

Heterodon platyrhinus Cope; *Coluber heterodon* Daudin

Puff Adder, Spreading Adder, Hog Nose Snake, Blowing Adder

Anal plate, divided	Loreal, present	Postoculars
Azygous plate, present	Nasals, one	Preoculars
Caudals, 46-53 pair	Internasals, separated - by rostral	Supraoculars, two
Frontal, one	Nostril, in nasal	Scales, keeled
Lower labials, eleven	Rostral, protrudes upward	Scale row, twenty-five
Upper labials, eight	Parietals, two	Ventrals, 130-148

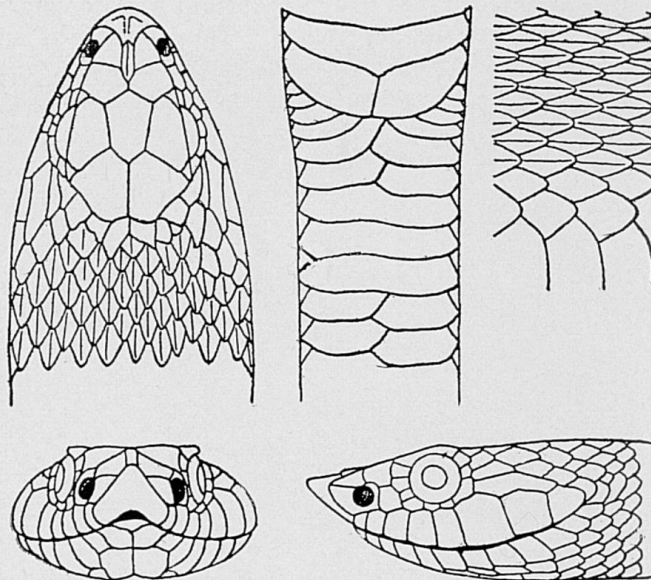
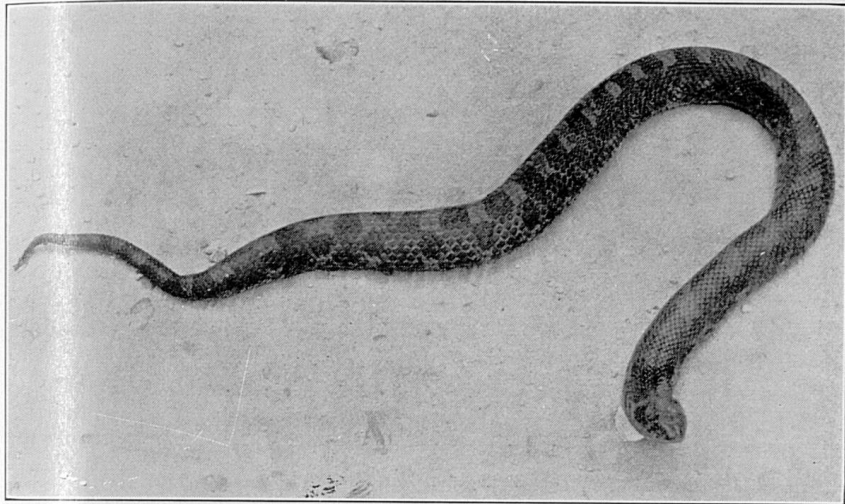
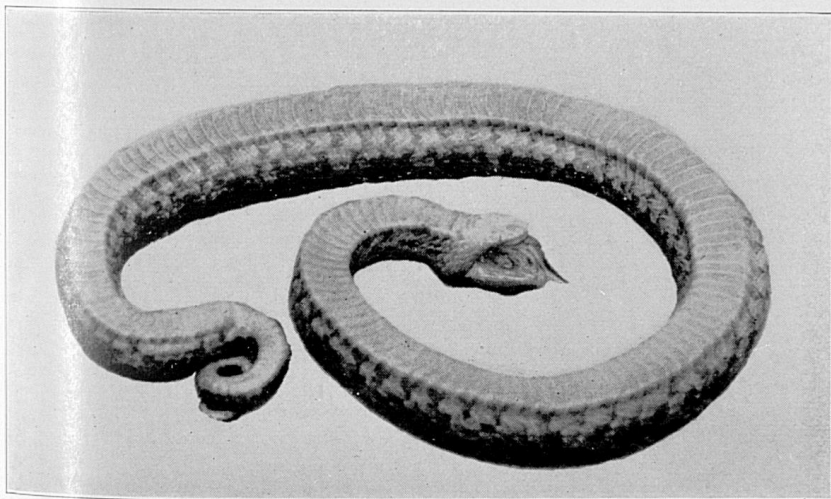


Figure 6. *Heterodon contortrix* (Linne) Stejneger and Barbour
(After Cope)

PLATE 5



A. *Heterodon contortrix*, Stejneger and Baur
From live specimen in the Museum.



B. *Heterodon contortrix*, feigning death.
From live specimen in the Museum.

Description: Color on dorsal surface brown with a series of dark blotches, each separated by two scales which are sometimes white, alternating with the larger brown blotches in the center or smaller brown blotches on each side, and a dark band crossing the prefrontals. A black line extends from posterior of the eye for several scales back. Near the tail the blotches form transverse bands. Ventral surface drains to yellow.

Habits: This is one of the most common of Alabama snakes and one of the most popularly known, being termed the "Spreading Adder." This snake has the ability, as the Cobra, to distend the ribs giving it very much larger proportions. It gives out a hissing noise. These two protective agencies have made it much feared by the colored race. This snake also has another protection, more for defensive than offensive, since oftentimes when bitten by a dog or hit by a stick, it will writhe and lie on its back feigning death until the danger is over, when it quickly turns over and glides off. I have watched it simulate death for forty-five minutes. Outside of its bluffing habits it is a very docile snake. I have repeatedly picked them up, handled and teased them, but have never been able to get one to bite. This species has a particular fondness for rats and should be carefully protected at all times.

This species sometimes takes a black form and is called, by a few, *niger*. In this list however it has been given no definite subspecific rank.

Type locality: Carolina.

General distribution: Eastern United States.

Alabama: Over the entire State.

Anal

Azyg

3 t

Poste

lar

Head

Lower

Upper

D
black
is a ro
the sp
H
T
A
bly ov

Heterodon simus, (Linne), Holbrook

Hog Nose Snake, Spreading Adder, Puff Adder, Blowing Adder

Anal plate, divided	Lateral, 5 scale rows not keeled	Orbital, separated from labials by small scales
Azygous, encircle by 3 to 5 plates	Loreal, present	Parietals, two very broad
Posterior chin shield larger than anterior	Mental, large	Supraoculars, two
Head, scales not keeled	Nasals, two	Scales, keeled
Lower labials, nine	Nostril, between nasals	Scale row, 25
Upper labials, eight	Rostral, protrudes upward	Temporals, 4 each side

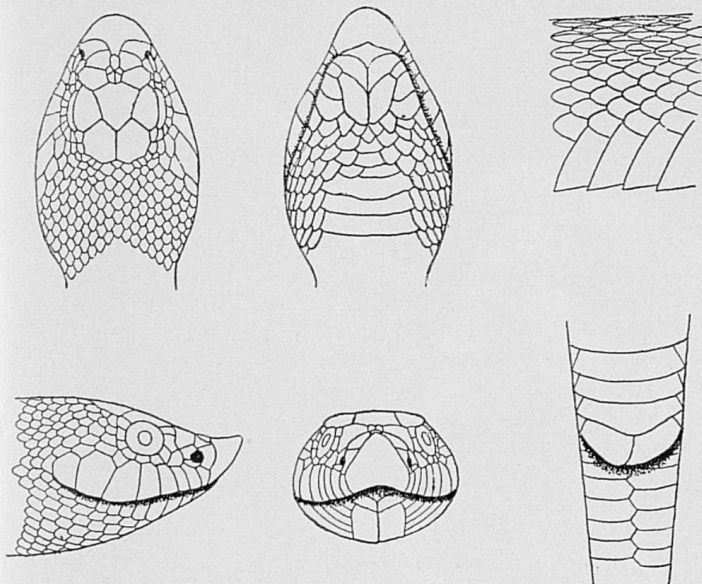


Figure 7. *Heterodon simus* (Linne) Holbrook
(After Cope)

Description: Dorsal surface is a creamy brown with a series of large black spots down the mid line. At alternating points to these spots there is a row of smaller spots on each side. The ventral surface does not have the spotting as is the case with *Heterodon contortrix*.

Habits: Practically the same as *Heterodon contortrix*.

Type locality: Carolina.

Alabama records: Baldwin, Tuscaloosa and Mobile Counties. Possibly over entire State.

Genus: LIOPELTIS

Liopeltis vernalis (Harlan) Cope*Coluber vernalis*, DeKay

Smooth Greensnake

Anal plate, divided	Loreal angular	Preorbitals, one
Caudals, 69-92	Mental, small	Posterior orbitals, two
Frontals, one	Nasals, one	Parietals, two
Prefrontals, two	Internasals, two	Scales, not keeled
Lower labials, eight	Nostril, in nasal	Scale row, fifteen
Upper labials, seven	Rostral, normal	Ventrals, 131-139

PLATE 6

*Liopeltis vernalis* (Harlan) Cope

Used through courtesy of New York Zoological Society.

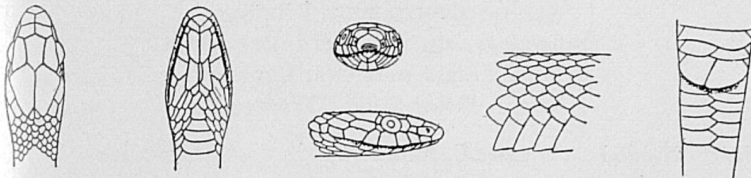


Figure. 8. *Liopeltis vernalis* (Harlan) Cope
(After Cope)

Description: Dorsal surface dark green and lighter on the lateral surface. Ventral surface yellowish white.

Habits: This species is only helpful to the farmer in that it is very fond of insects. They feed upon grasshoppers, crickets, larvae of moths and other insects. They will not eat any other food in captivity. This species lives among vines, weeds and grass and is a wonderful example of protection by coloration. They are entirely harmless and will make no attempt to bite.

Type locality: Pennsylvania and New Jersey.

General distribution: Canada to Florida.

Alabama records: There are no Alabama records of this snake. It is included as it should be here and so might be identified by this key.

Genus: OPHEODRYS, Fitzinger

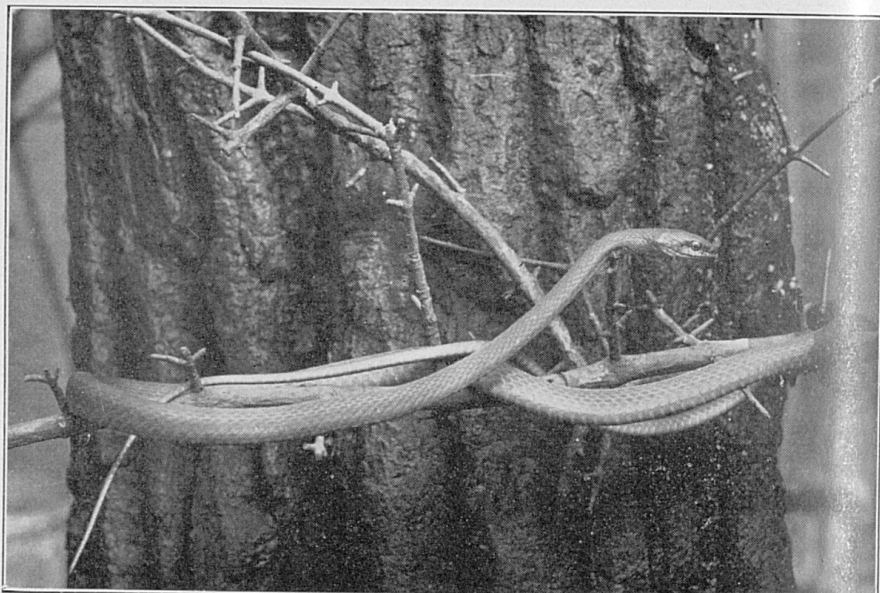
Opheodrys aestivus (Linne) Cope

Cylophis aestivus, Cope

Rough Greensnake, Treesnake

Anal plate, divided	Loreal, small	Postoculars, two
Caudals, 111-130	Nasals, single	Preoculars, one
Frontals, one	Internasals, two	Scales, keeled
Prefrontals, two	Nostril, in nasal	Scale row, seventeen
Lower labials, eight	Rostral, normal	Tail, $\frac{1}{4}$ total length
Upper labials, seven	Parietals, two	Ventrals, 150-165

PLATE 7



Opheodrys aestivus (Linne) Cope

Used through courtesy of New York Zoological Society.

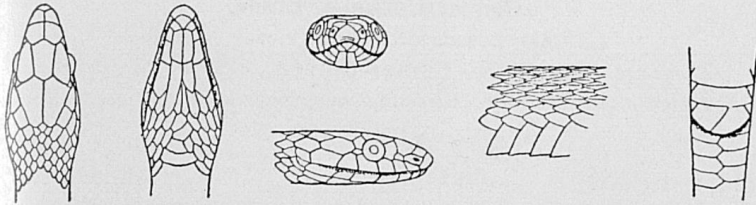


Figure 9. *Opheodrys aestivus* (Linne) Cope
(After Cope)

Description: Dorsal surface bright green with lateral surface somewhat less brilliant. Ventral surface is bright yellow.

Habits: This is another of the well protected snakes through coloration. Living a great deal in green bushes, this species is very difficult to spy. It is a great help to the farmer in catching insects. Lying motionless on a limb, insects will approach within easy range. It is very swift on the ground and in bushes.

Type locality: Carolina:

General distribution: New Jersey to Florida, west to Mexico and Northward to Kansas and Illinois.

Alabama records: Probably over entire State.

Genus: COLUBER, Linne.

Coluber constrictor constrictor, Linne

Zamenis constrictor, Linne; *Coluber constrictor*, Linne

Coluber flaviventris, Say; *Bascanium constrictor*, Baird and Girard
Black Snake, Black Racer

Anal plate, divided	Loreal, present	Portorbitals, two
Caudals, 93-110	Nasals, two	Postorbitals, two
Frontals, one	Internasals, two	Scales, not keeled
Prefrontals, two	Nostril, between nasals	Scale row, seventeen
Lower labials, eight	Rostril, broad and high	Tail 1/5 total length
Upper labials, seven	Preorbitals, two	Ventrals, 177-185

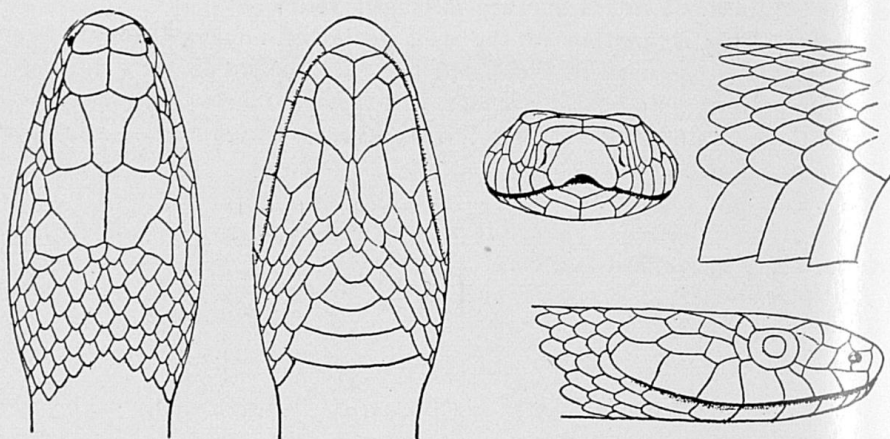
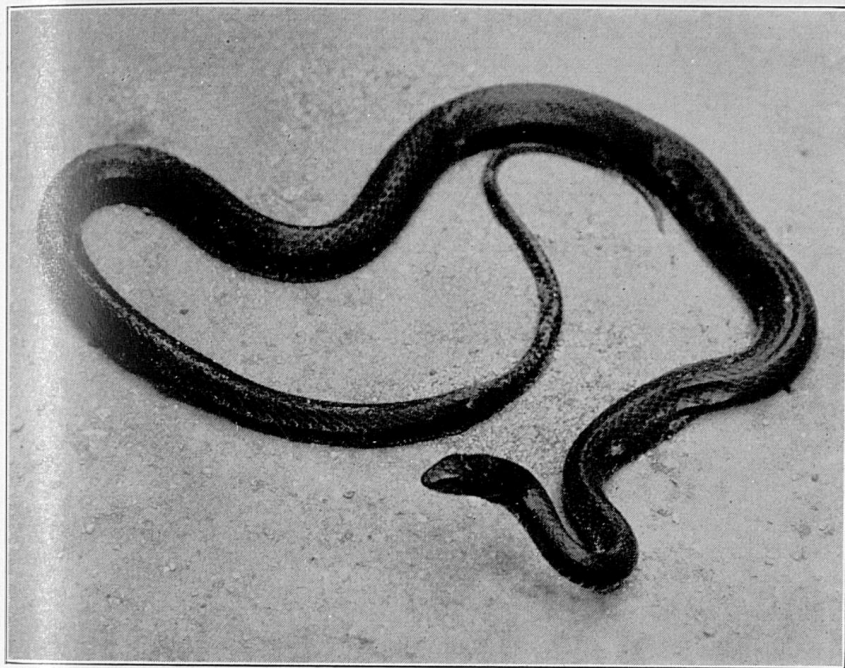


Figure 10. *Coluber constrictor constrictor* (Linne)
(After Cope)

D
green
H
realiz
Optim
you s
bite i
clean
to tha
steal
their
T
G
A

PLATE 8



Coluber constrictor constrictor, (Linne)
From live specimen in the Museum.

Description: Dorsal surface is satiny jet black. Ventral surface greenish black, steel gray to yellowish black.

Habits: This species is a great friend of the farmer, even though few realize the fact. The black racer is a great fighter and a still larger bluffer. Oftimes if one runs from these snakes they will persue. However, when you stop, they stop. They will strike very quickly when caught and their bite is easily felt, the teeth being quite sharp. The bite is invariably a clean wound and never festers. In fact their bite is much to be preferred to that of a cat. They feed on mice and other rodents. Possibly they will steal an egg or small chicken or any other small animal occasionally, but their usefulness far outweighs their little depredations.

Type locality: North America.

General distribution: Eastern United States.

Alabama: Widely distributed throughout State.

Coluber flagellum flagellum, Shaw
Zamenis flagellum flagellum, Cope; *Bascanium flagelliformis*, Cope;
Masticophis testaceus; *Natrix flagelliformis*
 Coach Whip, Whip Snake

Anal plate, divided	Loreal, single	Postoculars, two
Caudals, 80-112	Mental, small	Preoculars, two
Frontals, sides concave	Nasals, two	Supraoculars, very large
Prefrontals, two	Internasals, two	Scales, not keeled
Lower labials, nine	Rostral, protrudes	Scale row, 17
Upper labials, eight	Parietals, two	Ventrals, 182-211

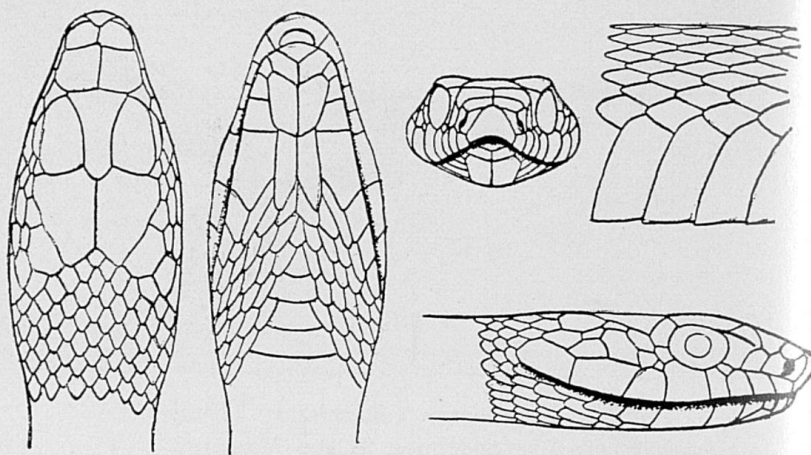
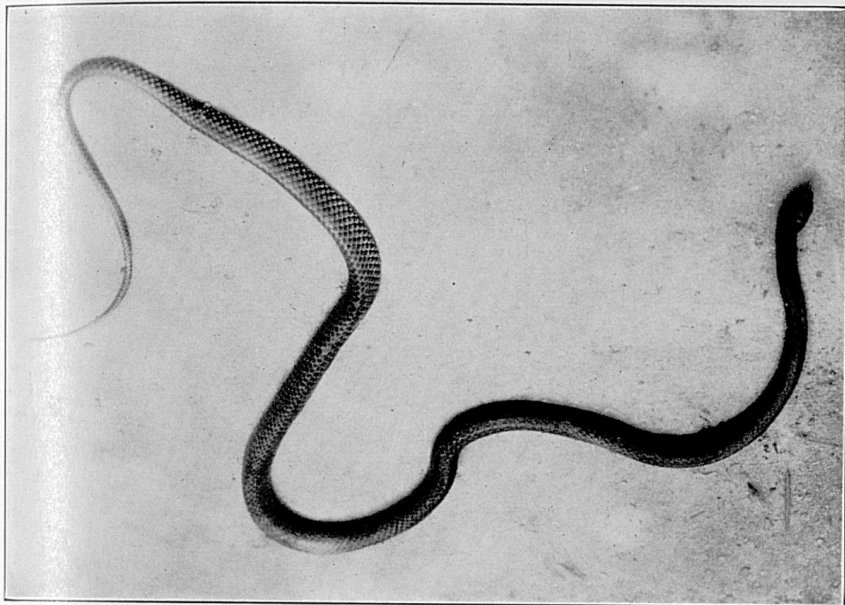


Figure 11. *Coluber flagellum flagellum* (Shaw)
 (After Cope)

De
 the pos
 has th
 white.
 TH
 H
 its cou
 bird ne
 consum
 Ov
 Di
 and ea
 Al

PLATE 9



Coluber flagellum flagellum, (Shaw)
From live specimen in the Museum.

Description: Black on anterior dorsal and lateral surfaces; nearing the posterior end there is a sudden fading into a yellowish brown. The tail has the appearance of a braided whip. The ventral surface is yellowish white.

This species attains a length of six feet or more.

Habits: This is an elongated species which glides very swiftly over its course. They have the ability to climb trees. Thus they destroy many bird nests and birds, but perhaps they counterbalance this destruction by consuming many rodents.

Oviparous.

Distribution: Widely distributed, being found from Virginia to Florida and east of the Rockies.

Alabama: Throughout the entire State.

Genus: ELAPHE, Fitzinger

Elaphe guttata, (Linne)*Coluber guttatus*, Linne; *Elaphis guttatus*, Dumeril
and Bibron; *Coluber guttatus*, Cope

Corn Snake, Chicken Snake, Scarlet Snake

Anal plate, divided	Loreal, present	Parietals, two
Caudals, 64-70	Mental, small	Postoculars, two
Frontals, one	Nasals, two	Preoculars, one
Prefrontals, two	Internasals, two	Scales, not keeled
Lower labials, eleven	Nostril, in nasal	Scale row, 27-29
Upper labials, eight	Rostral, broad	Ventrals, 214-230

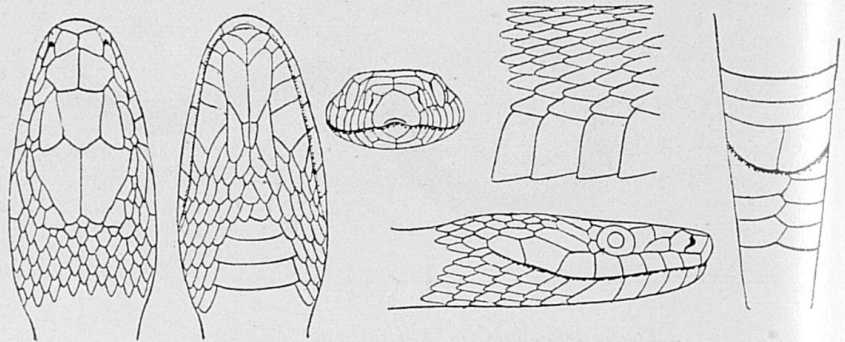
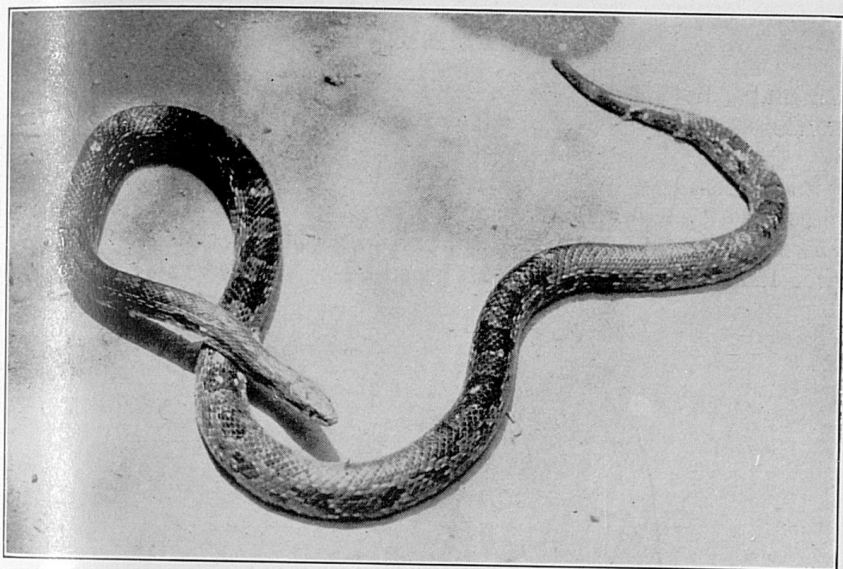


Figure 12. *Elaphe guttata* (Linne)
(After Cope)

De
of red
there i
tral ro
nating
Ha
and tr
birds.
balanc
It
using
strikes
Ty
Ge
Al

PLATE 10



Elaphe guttata, (Linne)
From live specimen in the Museum.

Description: Dorsal surface is a yellowish brown with a central row of red spots which are bordered with black. Alternating with these spots there is another row on each side of this central row. Opposite this central row there is a third row of similar blotches, opposite the first and alternating with the second. Ventral surface is yellowish white.

Habits: This species is somewhat arboreal, and is able to climb bushes and trees with great agility. Quite often it raids bird nests and catches birds. Its other food, which consists of mice, rats, moths, etc., helps overbalance its destructiveness.

It crawls rather slowly and on the approach of an enemy lies quietly, using that as a protection. It further protects itself with quite rapid strikes when necessary.

Type locality: Carolina.

General distribution: Maryland to Florida and Louisiana.

Alabama: Widely distributed throughout State.

Elaphe obsoleta obsoleta, (Say)
Coluber obsoletus, Say, *Elaphis obsoletus*, Garman,
Coluber obsoletus obsoletus, Cope
 Pilot Blacksnake

Anal plate, divided	Upper labials, eight	Parietals, one
Caudals, 60-90	Loreal, present	Postoculars, one very large
Frontals, one	Nasals, two	Preoculars, two
Prefrontals, two	Internasals, two	Scales, 16 rows keeled
Head scales, not keeled	Nostril, between nasals	Scale row, 25-27
Lower labials, twelve	Rostral, broad	Ventral, 225-246

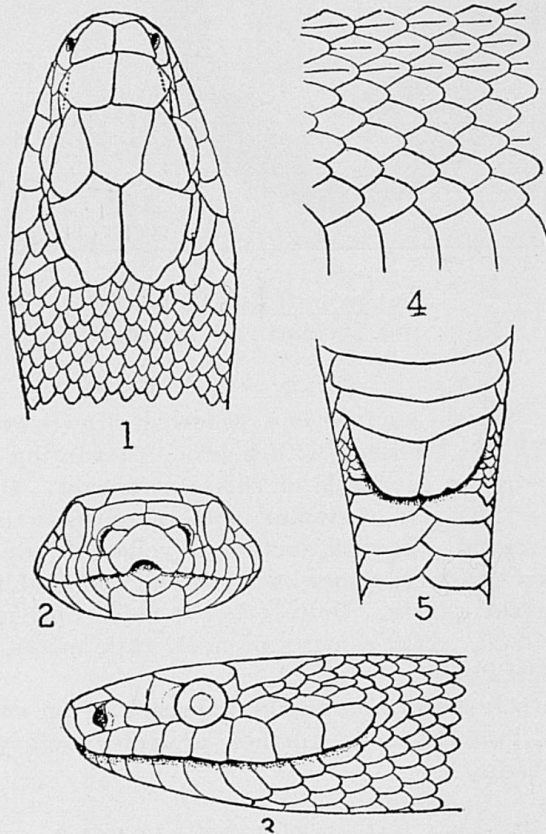


Figure 13 *Elaphe obsoleta obsoleta* (Say)
 (After Cope)

Description: Dorsal surface is lustrous black. The edges of the scales are so colored as to make the black appear as if in a large number of black blotches. Upper labials often white. Ventral portion, anterior part white gradually shading to gray.

Habits: This species inhabits the areas selected by rattlers and copperheads for their abode. This species got its name from a false idea that it warns rattlers of approaching danger. They feed on birds, rats, mice and even half grown rabbits. They are somewhat arboreal but more often found in old logs and among rocks and ledges.

Type locality: Isle au Vache to Council Bluffs on the Missouri river.

General distribution: New England westward to Michigan, southward to Florida and Texas.

Alabama records: None. It should be found in this State, thus it is included in this report.

Elaphe obsoleta confinis (Baird and Girard)

Scotophis confinis, Baird and Girard; *Coluber confinis*, Cope
Gray Rat Snake, Spotted Chicken Snake

Anal plate, divided	Loreal present	Postoculars, two
Causals, 75-96 pairs	Nasals, two	Preoculars, one
Frontals, one	Internasals, two	Scales, 11-13 rows keeled
Prefrontals, two	Nostril, between nasals	Scale row, 27
Lower labials, eleven	Rostral, broad	Temporals, 2-3
Upper labials, eight	Parietals, two	Ventrals, 231-258

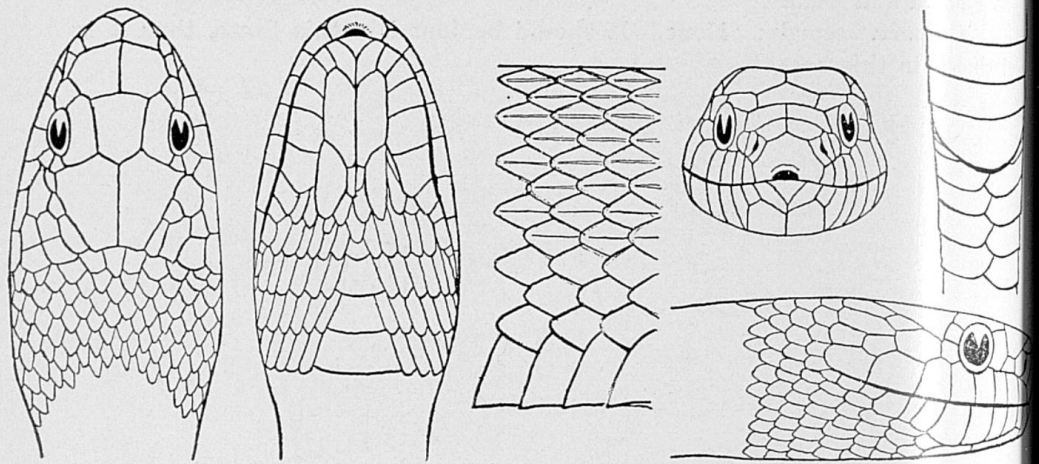
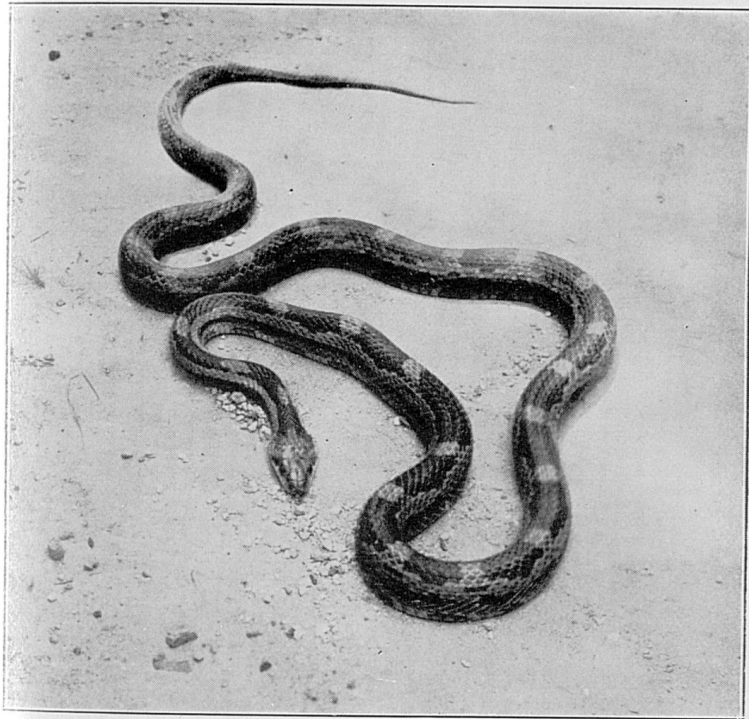


Figure 14. *Elaphe obsoleta confinis* (Baird and Girard)
Stejneger and Barbour
(After Cope)

PLATE 11



Elaphe obsoleta confinis, (Baird and Girard)
Stejneger and Barbour
From live specimen in the Museum.

PLATE 12



Elaphe obsoleta confinis, being crushed by a *Lampropeltis getulus holbrooki*. The tip of the head of the chicken snake may be seen protruding from the coils of the King Snake. The head which is protruding is that of the King Snake.

Description: Pale gray, with a series of large, dark brown saddles on the back; on the neck these blotches are long and send out narrow extensions from their corners, thus assuming an H-shaped formation. On each side of the body is a series of smaller blotches, and beneath this another, smaller series, at the edges of the abdominal plates.

On the back and the sides, numerous scales show white edges when the skin is distended, as seen on the typical form the Pilot Blacksnake. The head is gray, dotted with black. There is often a dark band in front of the eyes and usually a wide dark band from behind each eye to the angle of the mouth. The lip plates are white, bordered with black. The eye is silvery.

On the forward portion of the body the abdomen is white irregularly blotched and peppered with gray; on the latter portion the abdomen is uniform, dark gray. (Ditmars).

Habits: Similar to *Elaphe obsoleta obsoleta*.

Type locality: Anderson, South Carolina.

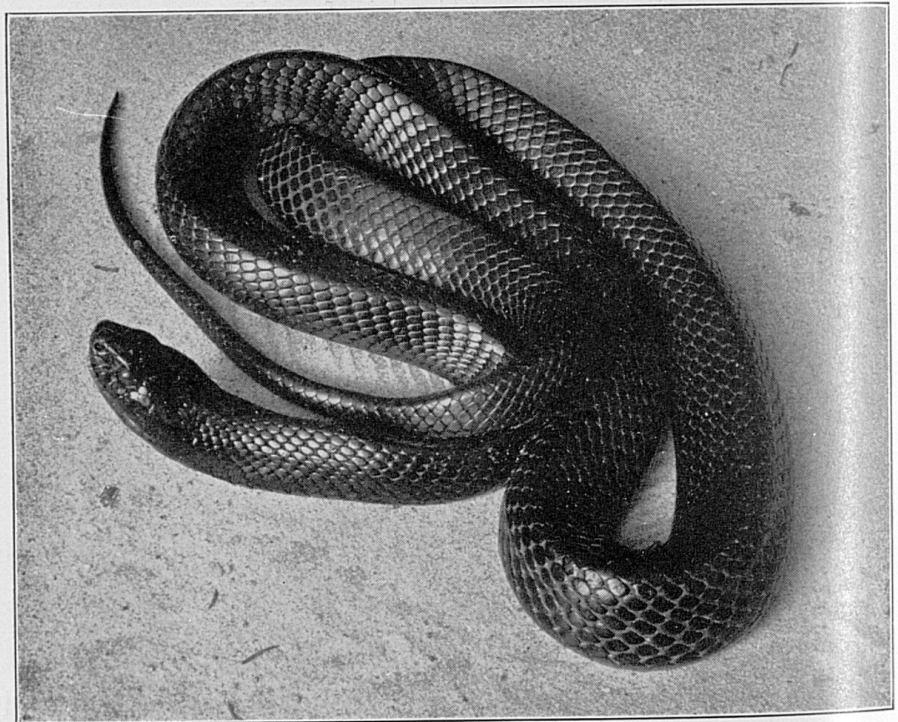
General distribution: Atlantic and Gulf States.

Alabama records: Widely distributed over State.

Genus: DRYMARCHON, Fitzinger
Drymarchon corais couperi, Holbrook
Drymarchon corais couperi, Strecker
Coluber couperi, Holbrook;
Compsosoma corais couper, Cope
 Gopher Snake, Indigo Snake

Anal plate, entire	Loreal, present	Parietals, two
Caudals, 60	Mental, small	Postoculars, two
Frontals, one	Nasals, two	Preoculars, two
Prefrontals, two	Internasals, two	Scales, not keeled
Lower labials, ten	Nostril, between nasal	Scale row, seventeen
Upper labials, seven	Rostral, semicircular	Ventrals, 184-185

PLATE 13



Drymarchon corais couperi (Holbrook) Strecker
 Used through courtesy of New York Zoological Society.

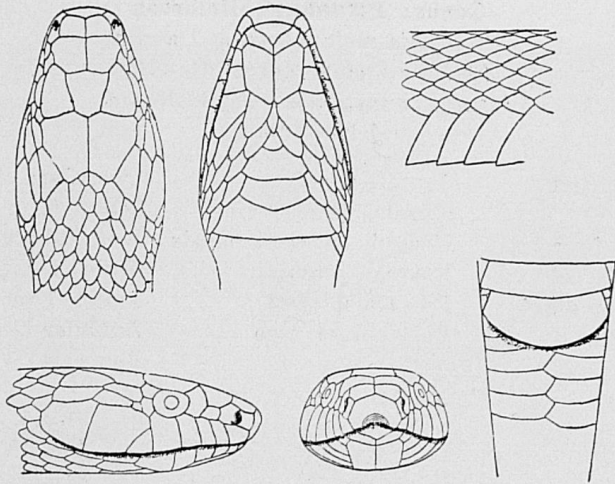


Figure 15. *Drymarchon corais couperi* (Holbrook) Strecker
(After Cope)

Description: With the exception of the head, the central and dorsal surface is shining indigo black. The anterior ventral portion of the head and the superior labials are reddish brown.

Habits: This is one of the swiftest snakes inhabiting Alabama. It is found in the sandy regions in the southern part of the State. This species feeds on small animals, birds, frogs, lizards and rodents. Thus it may be considered as quite beneficial to the farmer. It received its name from the fact that it lives in and retreats in time of danger to Gopher tortoise holes in the sand.

Type locality: Dry pine hills south of Altamaha, Georgia.

General distribution: Carolinas to Florida and westward to Texas.

Alabama: Mobile and Baldwin Counties, it is possibly found in other southern counties of the State.

Genus: PITUOPHIS, Holbrook
Pituophis melanoleucus, Daudin
Coluber melanoleucus, Daudin
Pituophis melanoleucus, Holbrook
 Pine Snake

Anal plate, entire
 Caudals
 Prefrontals, four
 Lower labials, 14
 Upper labials, eight
 Loreal, small

Mental, small
 Nasals, two
 Nostril, between nasals
 Rostral, angular
 Parietals, two
 Postoculars, two

Preoculars, one
 Scales 5, 6, 7,
 slightly keeled
 Scale row, 27-31
 Tail $\frac{1}{7}$ total length
 Anterior temporals, four
 Ventrals

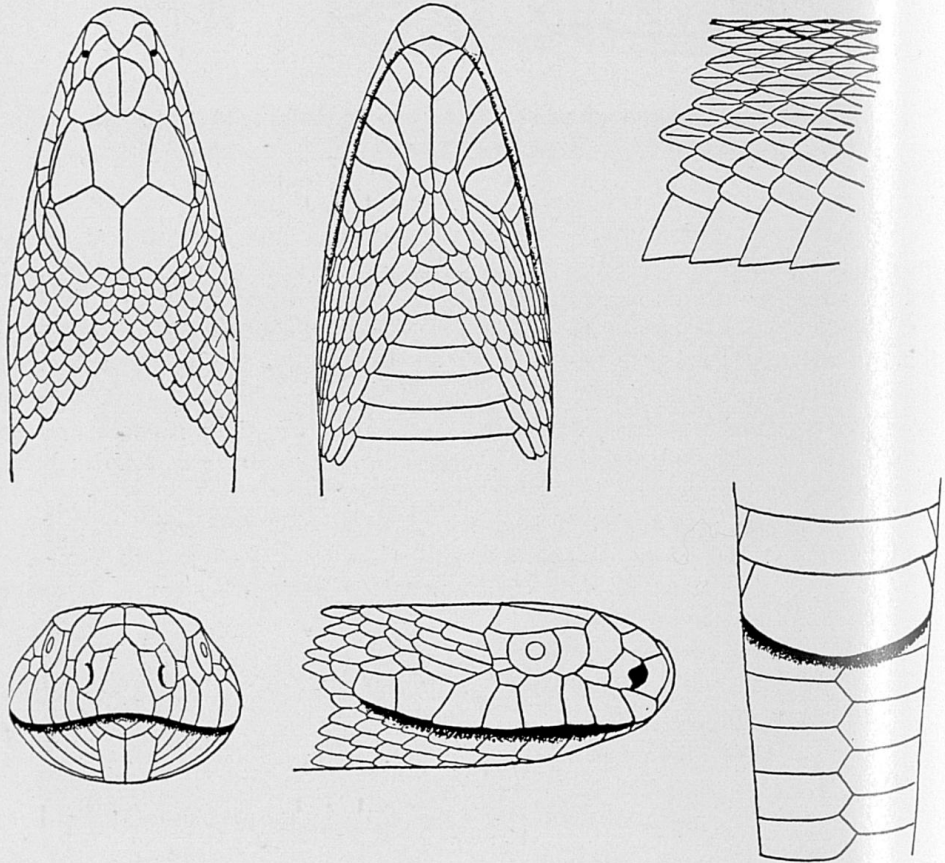
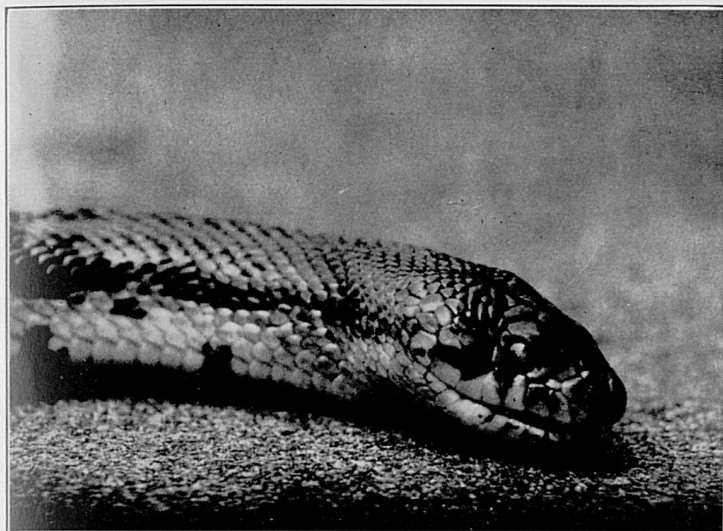


Figure 16. *Pituophis melanoleucus* (Daudin) Holbrook
 (After Cope)

PLATE 14



A. Head of *Pituophis melanoleucus*.



B. *Pituophis melanoleucus*, (Daudin) Holbrook
This shows the remarkable protective coloration.
From live specimen in the Museum.

PLATE 15



Pituophis melanoleucus lödingii, Blanchard
From live specimen in the Museum.

D
sides.
not sh
portio
colour
row (
head
imma
H
often
make
It ma
O
T
G
and A
A
are tw
is *P. n*
below.
T
brown
unifor
spots
the sp

Description: Dull white on the back, becoming intensely white on the sides. Down the back is a series of large, black blotches, close together and not sharply defined on the forward portion of the body, but on the latter portion, some distance apart and in vivid contrast with the pale ground-colour. There is a row of smaller blotches on each side, and beneath this row (on the edge of the abdominal plates), a row of large black spots. The head is thickly dotted with black. The greater area of the abdomen is immaculate, marble white. (Cope).

Habits: This species frequents the pine lands and for this reason is often called the pine snake. Like the spreading adder it has the ability to make a loud hissing noise. It feeds on birds, rats, mice and other rodents. It may be considered beneficial to the farmer.

Oviparous.

Type locality: South Carolina and Florida.

General distribution: Pine barrens of southern New Jersey, Florida and Alabama.

Alabama records: Mobile, Tuscaloosa and Baldwin Counties. There are two subspecies of *Pituophis melanoleucus* reported from this State. One is *P. m. lödingii*, Blanchard, which is uniformly black above and slate gray below. This subspecies was named after H. P. Löding of Mobile.

The second subspecies *P. m. mugitus*, Barbour, which is a pied rusty brown and white. The dorsal of the anterior half of the body is almost uniformly brown with the spots indistinguishable in most specimens; the spots of the posterior half become decidedly red toward the end on the tail; the spots on the body and tail do not exceed thirty-nine.

Genus: LEIMADOPHIS, Fitzinger

Leimadophis flavilatus, Cope*Dromicus flavilatus*, Cope; *Rhadinea flavilata*, Cope

Anal plate, divided	Loreal, present	Parietals, two
Caudals, 77	Mental, small	Postoculars, two
Frontals, one	Nasals, two	Preoculars, one
Prefrontals, two	Internasals, two	Scales, not keeled
Lower labials, 9	Nostril, in prenasal	Scale row, 15-17
Upper labials, 7	Rostral, normal	Ventrals, 126

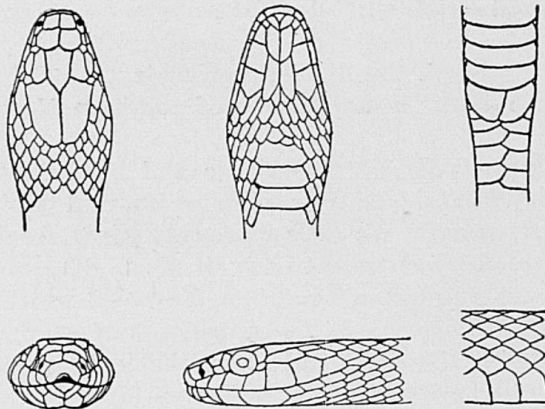
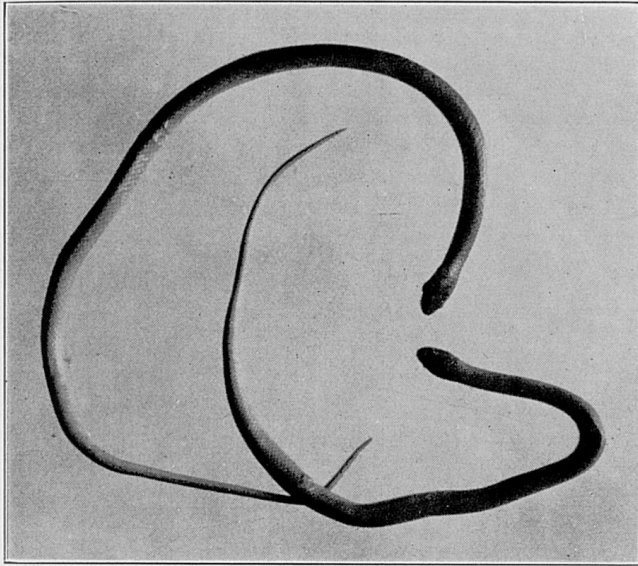


Figure 17. *Leimadophis flavilatus* (Cope) Stejneger & Barbour
(After Cope)

De
inferio
ning o
someti
ous bu
brown
last la
rows.
dots on
Ha
caying
the hab
Ty
Ge
Al.

PLATE 16



Leimadophis flavilatus (Cope) Stejneger and Barbour
From preserved specimens in the Museum.

Description: Color above, a rich golden brown, the scales of the two inferior rows on each side broadly gold-edged, the color of the back beginning on the third row. The ends of the scales of the vertebral row are sometimes darker tipped. Head dark brown, darkest behind, with numerous but obscure paler vermiculations. Sides of head pale with a reddish-brown band from the rostral plate through the eye to the middle of the last labial. Labials whitish, with black dots on the posterior, in oblique rows. Below white, lower labials sparsely black dotted. A pair of pale dots on the common occipital suture. (Cope).

Habits: This diminutive snake burrows in the soft soil, leaves and decaying logs. It feeds upon small insects. Very little is known concerning the habits of this snake as it is rather rare.

Type locality: Fort Macon, N. C.

General distribution: North Carolina to Florida and Alabama.

Alabama: Mobile County.

Genus: LAMPROPELTIS

Lampropeltis elapsoides (Holbrook)

Stejneger and Barbour

Osceola elapsoidea, Cope; *Coluber elapsoides*, Holbrook;*Coronella doliata*, Boulenger

Anal plate, undivided	Loreal, present	Postoculars, two
Caudals, forty-four	Nasals, two	Preoculars, one
Frontals, one	Internasals, two	Supraoculars, two
Prefrontals, two	Nostril, inner margin	Scales, not keeled
Lower labials, seven	Rostral, broad	Scale row, nineteen
Upper labials, seven	Parietals, two	Ventrals, 179

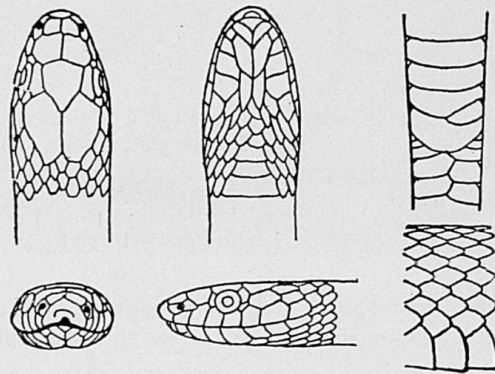


Figure 18. *Lampropeltis elapsoides* (Holbrook) Stejneger and Barbour
(After Cope)

Description: Snout red, followed by white. The remainder of the pattern is a design of two black bands separated by an area of red, between each of these designs there is the area of white, thus black, red, black, white, etc. The black bands are about two scales wide, the red four to six or more, the white one to two. This snake never attains any great length. The color pattern of the species with its large red and yellow blotches separated by narrow rings of black is contrasted with the deadly species *Micrurus fulvius* which has black snout and body color pattern, large rings of red and black separated by narrow rings of yellow.

Habits: Often found in the hill country among fallen limbs and brush. It is rather aggressive and feeds upon other small snakes, lizards, mice and other rodents.

General distribution: North Carolina to Florida and west to Mississippi.

Alabama: It is perhaps distributed sparingly over the entire State.

Lampropeltis getulus getulus (Linne) Cope
Ophibolus getulus getulus, Cope; *Coluber Getulus*, Linne
Coronella getula, Holbrook
 King Snake, Chain Snake

Anal plate, entire	Loreal, present	Postorbitals, two
Caudals, 41-52	Nasals, two	Parietals, two
Frontals, one	Internasals, two	Supraoculars, two
Prefrontals, two	Nostril, between nasals	Scales, not keeled
Lower labials, nine	Rostral, normal	Scale row, 21-23
Upper labials, seven	Preorbitals, one	Ventrals, 204-224

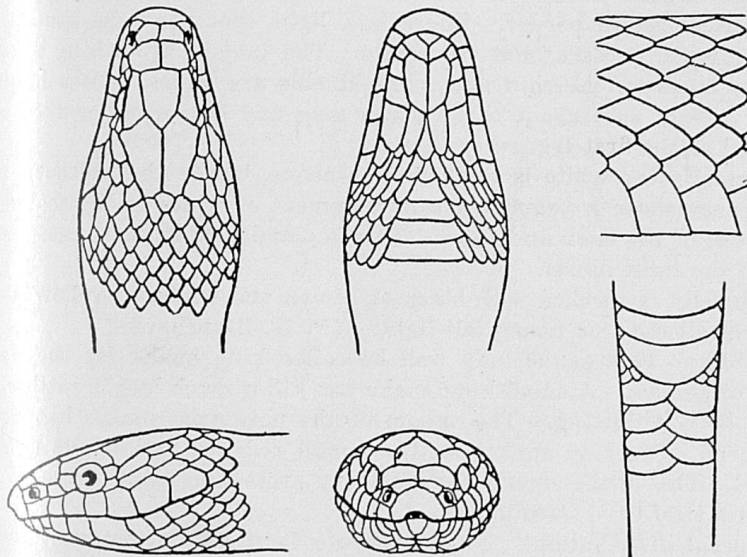


Figure 19. *Lampropeltis getulus getulus* (Linne) Cope
 (After Cope)

Description: The pattern is formed of a series of narrow white or yellow bands, 23-52 in number, that cross the back transversely or obliquely, bifurcate on the sides, and there join a series of quadrate light spots. The latter overlap a little on the ventral plates, and alternate with the dorsal bands. The belly is checked with a light brown, and white or yellow, with a tendency for the dark to be mostly opposite to the light areas on the sides.

The ground color of the head is dark. The rostral is white with a black posterior border. The internasals, prefrontals, and frontals are dark, with each a transverse light bar anteriorly. There is a medial light spot on each supraocular near the frontal suture. Each parietal has a round light spot medially, near the common suture, and an elongate light spot on the anterior lateral border. There is a light spot near the center of the nasals, loreals, oculars, and temporals. The labials are white, with dark posterior borders; the chin and gular shields are white. Close behind the head is a light spot about three scales long and two wide, or this may be elongated as the first transverse band.

Normally the white is restricted as above, but in the southern portion of the range there is commonly a development of white in the scales of the dark areas of the back and sides. This is usually most pronounced midway between the light bands.

The belly is checked with black or brown and white, or yellow and may be nearly all dark or nearly all light. (F. N. Blanchard)^{*1}

Habits: This genus may well be called king snake for they are the master of snakes. A small king snake can kill a much larger rattler. This is done by constricting. The venom of the poisonous snakes has no effect upon them. The king snakes feed on small rodents, making its usefulness two fold. This snake should receive every protection at all times.

Type locality: Carolina.

General distribution: New Jersey to Central Florida, west into Alabama.

Alabama: Only southeastern part of the State or east of the Alabama River.

*1. Bulletin 114, U. S. National Museum, Page 50.

Anal p
Caudal
Frontal
Prefrontal
Lower
Upper

Lampropeltis getulus holbrooki, Stejneger
Ophibolus getulus sayi, Holbrook
 King Snake, Say's King Snake, Salt and Pepper Snake

Anal plate, entire	Loreal, small	Postorbitals, two
Caudals, 49-52	Nasals, two	Parietals, two
Frontals, one	Internasals, two	Supraoculars, two
Prefrontals, two	Nostril, between nasals	Scales, not keeled
Lower labials, 9	Rostral, normal	Scale row, 21
Upper labials, seven	Preorbitals, one	Ventrals, 212-225

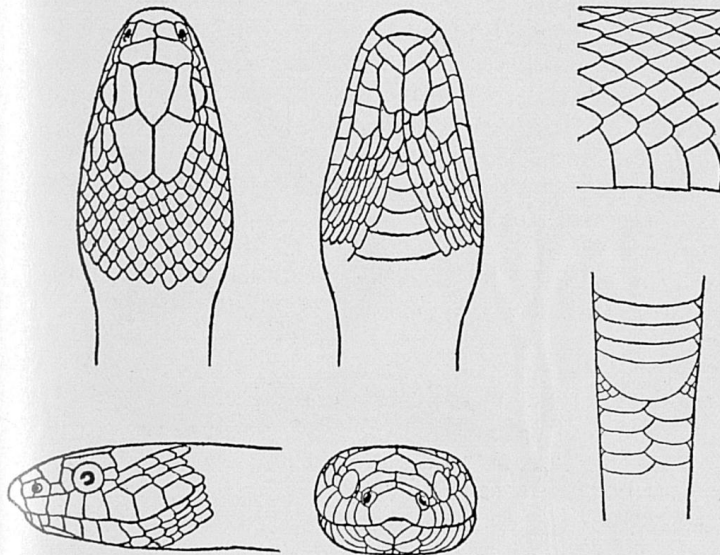


Figure 20. *Lampropeltis getulus holbrooki*, Stejneger
 (After Cope)

PLATE 17



Lampropeltis getulus holbrooki, Stejneger
From live specimen in the Museum.

De
or yello
interva
of the s
distinct
half a
white b
of the
is chec
head li
the int
each of
of the
Th
brooki
Ty
Ge
Illinois
Al
western

Description: The general color above is blue-black with an oval white or yellow or greenish-yellow spot near the center of each scale. At regular intervals the white centers lose their normal orientation with the long axes of the scales and become so grouped and oriented as to form from 50 to 100 distinct, short, transverse bands on the back, which are commonly less than half a scale in width and usually form a dotted rather than continuous white band. Ventrally the white centers increase in size so that the scales of the first row may be described as white with black borders. The belly is checked with black and white, the white usually predominating. The head like the body is spotted with white. Transverse bars of white cross the internasals, prefrontals, and supraoculars. There is a light spot on each of the loreals, nasals, oculars, and temporals. The common borders of the labials are black. (F. N. Blanchard).

There is another species or subspecies so closely related to *L. g. holbrooki* that it is placed along with this species.

Type locality: Valley of the Mississippi.

General distribution: Western Alabama to central Texas, north to Illinois and Indiana.

Alabama: Mobile and Tuscaloosa Counties and perhaps the entire western portion of the State.

Lampropeltis getulus niger, (Yarrow)
Ophibolus getulus niger, Yarrow, *Phibolus niger*, Say
Black King Snake

Description: The color pattern is a reduction from that of *holbrooki* by obliteration of the yellow centers on the scales of the dark areas on the back, and contraction in size of all the other light spots. This leaves the dorsal surface black, crossed by 50 to 90 very narrow crossbands of yellow, which tend to fork on the sides and there join an alternating series of short, narrow transverse bars. Occasionally the crossbands on the back may have nearly or quite disappeared, or sometimes the white spots between the bands may be somewhat developed. The lower rows of dorsal scales are more or less spotted with yellow. The belly is checked with black and white or yellow, the black sometimes predominating. The spotting on the head is exactly like that of *holbrooki* except that the spots are fewer and much smaller. (F. N. Blanchard).

Anal
Cauda
Front
Prefr
Lower
Upper

D
the yo
are ab
blotche
wide c
spotted
Ty
Ge
Al

Lampropeltis rhombomaculata, (Holbrook)
Cobuler rhombomaculatus, Holbrook
Ophibolus triangulus rhombomaculata, Garman
 King Snake

Anal plate, entire	Loreal, small	Preorbitals, one
Caudals, 31-35	Nasals, two	Parietals, two
Frontals, one	Internasals, two	Rostral, normal
Prefrontals, two	Nostril, between nasals	Scales, not keeled
Lower labials, 8-9	Postoculars, two	Scale row, 21-23
Upper labials, 7	Supraoculars, two	Ventrals, 191-213

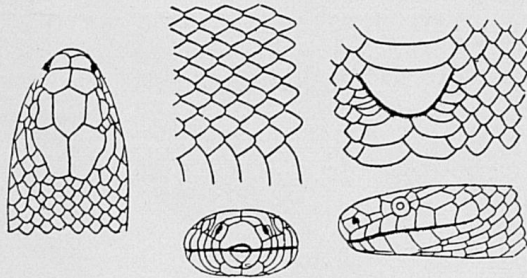


Figure 21. *Lampropeltis rhombomaculata* (Holbrook) Cope
 (After Cope)

Description: In the adult this snake is generally uniform brown. In the young, however, there are about 60 dorsal blotches in the midline which are about two scales long and about ten scales wide. Alternating with these blotches in the midline are blotches of about one scale long and six scales wide on each side. Ventral surface is a yellowish white. The head is spotted with a brown blotch across the prefrontal.

Type locality: Georgia and Alabama.

General distribution: Maryland to Georgia and Alabama.

Alabama records: Mobile County.

Genus: CEMOPHORA, Cope
Cemophora coccinea (Blumenbach) Cope
Coluber coccineus, Blumenbach
 Scarlet Snake, Milk Snake

Anal plate, entire	Loreal, present	Postoculars, two
Frontals, one	Nasals, one	Preoculars, two
Prefrontals, two	Internasals, two	Scales, not keeled
Lower labials, 8	Nostril, in center of nasal	Scale row, 19
Upper labials, 6	Parietals, two	Tail, $\frac{1}{8}$ total length

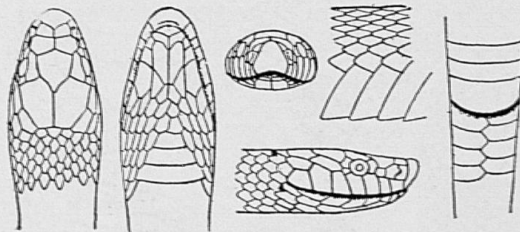
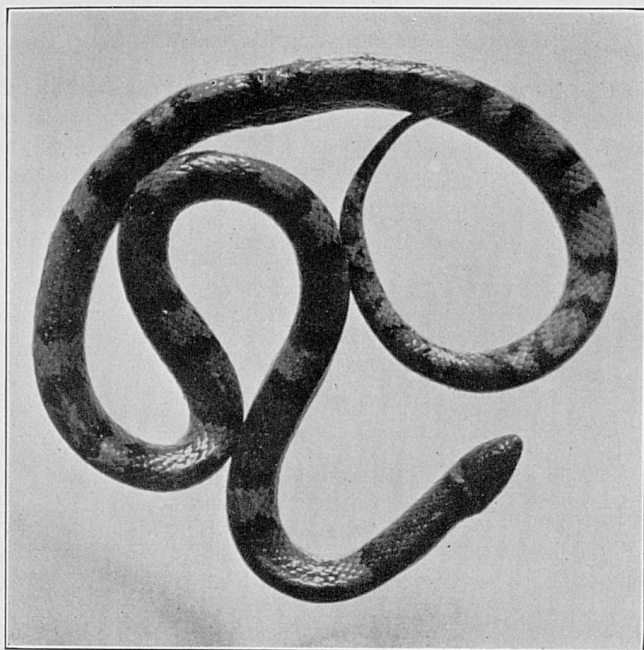


Figure 22. *Cemophora coccinea* (Blumenbach) Cope
 (After Cope)

D
 black
 yellow
 T
 in tha
 H
 under
 bite.
 O
 T
 G
 A

PLATE 18



Cemophora coccinea (Blumenbach) Cope
From a preserved specimen in the Museum.

Description: Dorsal surface large scarlet blotches surrounded by black bands. Between the scarlet bands surrounded by black is a band of yellow. Head scarlet with black band across eyes.

This species may be easily distinguished from the poisonous *Micrurus* in that its snout is red while the *Micrurus* snout is black.

Habits: This species feeds on small frogs, lizards and insects. It hides under dark and fallen trees. They are docile and show little tendency to bite.

Oviparous.

Type locality: Florida.

General distribution: Maryland to Alabama, Louisiana and Florida.

Alabama: Rather widely distributed over the State.

Genus: *NATRIX*, Laurenti
Natrix clarkii (Baird and Girard) Cope
Regina clarkii, Baird and Girard
 Salt water moccasin, Clark's water snake

Anal plate, divided	Loreal, present	Preorbitals, one
Caudals, 60-68	Mental, small	Postorbitals, 2-3
Frontals, one	Nasals, one	Parietals, two
Prefrontals, two	Internasals	Scales, keeled
Lower labials, nine	Nostril, in nasal	Scale row, 21
Upper labials, eight	Rostral, semicircular	Ventrals, 136

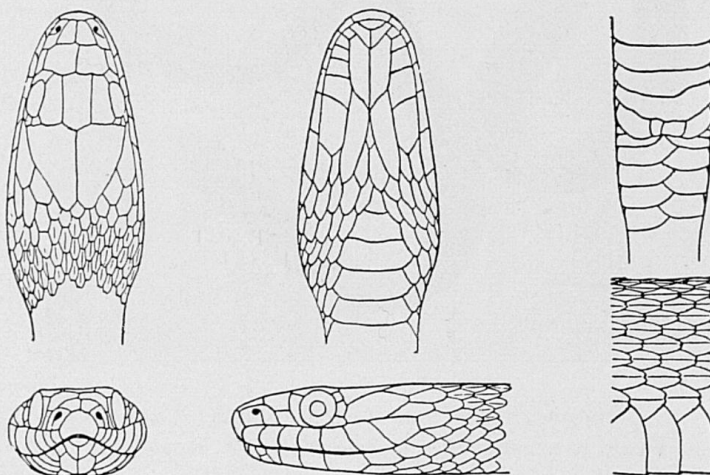


Figure 23. *Natrix clarkii* (Baird & Girard) Cope
 (After Cope)

Description: Dorsal surface greenish brown. There is a central brown stripe somewhat darker, and about three scales wide. Lateral to this on each side is another not quite so wide, giving this species quite a striped appearance. Ventral surface, the lateral portion is greenish while the central portion is yellow.

Habits: It inhabits the brackish and salt water near the Gulf. During warm weather it is rarely seen out of the water. This snake practically lives on fish and when plentiful may be harmful to the fishing industry.

Type locality: Indianola, Texas.

General distribution: Gulf coast from Florida to Texas.

Alabama: Gulf Coastal Region.

Natrix cyclopium (Dumeril and Bibron) Cope
Tropidonotus cyclopium, Dumeril and Bibron
 Green Water Snake

Anal plate, divided
 Caudals, 66 pairs
 Frontals, one
 Prefrontals, two
 Lower labials, 12
 Upper labials, eight

Loreal, present
 Mental, small
 Nasals, one
 Internasals, two
 Nostril, in nasal
 Rostral, normal

Parietals, two
 Postoculars, two
 Preoculars, one
 Scales, keeled
 Scale row, 27-31
 Ventrals, 144

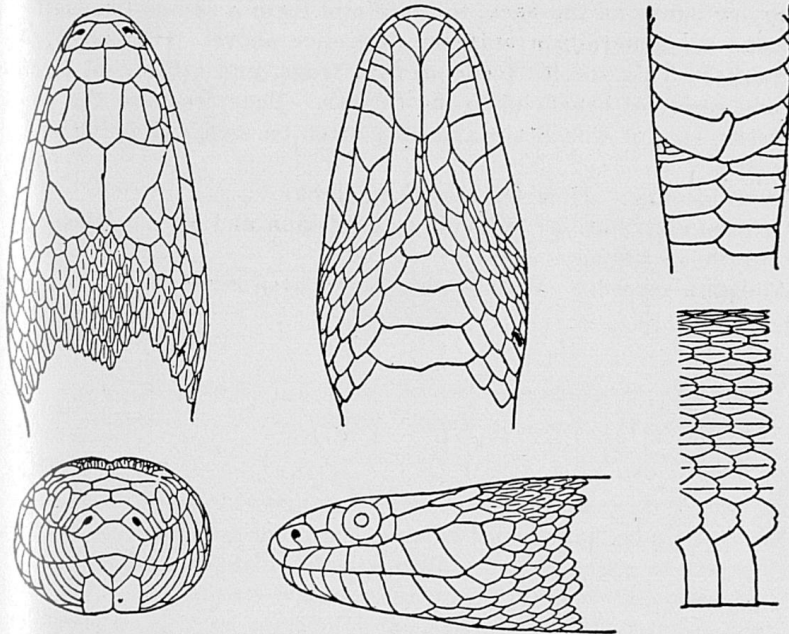


Figure 24. *Natrix cyclopium* (Dumeril & Bibron) Cope
 (After Cope)

Coloration:—Dark green or olive brown, with numerous, narrow black bands crossing the back; these bands are about the width of one scale, irregular and wavy and about two scales apart. In alternation with the bands of the back, is a series of black blotches on the sides, which are more pronounced on the latter two-thirds of the body.

With the exception of the lips, which are yellow, the head is of the uniform colour of the body. The abdomen is uniform yellowish with the exception of a tinge of gray upon the edges of the plates.

Although the scales are strongly keeled, this snake is more shiny than other species. In outline and pattern it appeals to the diamond-backed water snake, but may be at once separated by the absence of a tendency by the narrow bands on the back, to unite and form a rhomb-like pattern. Old specimens are generally a uniform, dull olive above. (Ditmars).

Habits: This species feeds on fish, frogs, and other cold blooded animals and so is not beneficial to the farmer. They frequent the ponds, rivers, creeks, etc., of this State and may often be seen swimming or lying on low bushes.

Type locality: New Orleans, Louisiana.

General distribution: Florida to Louisiana and up the Mississippi Valley to southern Illinois.

Alabama records: Widely distributed over State.

Anal
Cauda
Prefr
Lower
Upper
Lorea

De
on the
less di
the ba
plates
bright
Ha
Ty
Ge
Al

Natrix kirtlandii (Kennicott) Cope
Regina kirtlandii, Kennicott

Anal plate, divided	Mental, small	Postoculars, two
Caudals, 54-60	Nasals, two	Preoculars, one
Prefrontals, two	Internasals, two	Supraoculars, two
Lower labials, six	Nostril, between nasals	Scales, keeled
Upper labials, seven	Rostral, broad	Scale row, 19
Loreal, present	Parietals, two	Ventrals, 120-128

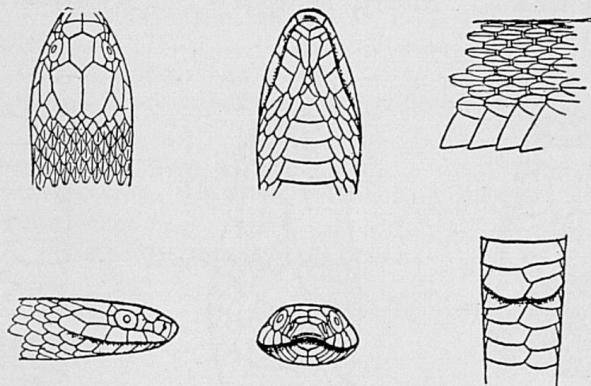


Figure 25. *Natrix kirtlandii*, Kennicott
 (After Cope)

Description: Pale brown, with large, upright blackish brown blotches on the sides, separated by narrow spaces of the ground color; two series of less distinct, rounded blotches on the back. The blotches of the sides and the back are in alternation with one another. Top of the head black; lip plates yellowish. Central portion of the abdomen, brick red; bordering this bright line on either side is a row of dark spots. (Ditmars).

Habits: Similar to *N. cyclopium*.

Type locality: Northern Illinois.

General distribution: Michigan, Wisconsin, Illinois, Indiana and Ohio.

Alabama: One record Tuscaloosa County, collected by William Roby.

Natrix rhombifera (Hallowell) Cope
Tropidonotus rhombifer, Hallowell
 Diamond Back Water Snake

Anal plate, divided
 Caudals, 62-70

Frontal, one
 Prefrontals, two
 Lower labials, eleven
 Largest lower labials,
 5th and 6th

Upper labials, eight
 Largest upper labials,
 6th and 7th

Loreal, present
 Nasals, one
 Internasals, two
 Nostril, in nasal

Parietals, two
 Postoculars, three

Preoculars, one
 Scales, keeled
 Scale row, 27
 Ventrals, 135-141

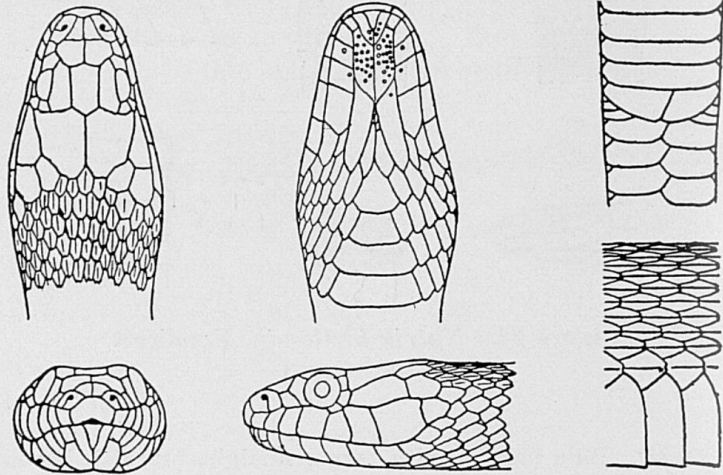


Figure 26. *Natrix rhombifera* (Hallowell) Cope
 (After Cope)

Color.—Ground color, above reddish gray. On the middle of the back there is a series of about 50 rhomboidal brown blotches. Alternating with the dorsal series there is, on each side, a series of similarly colored blotches. The lateral blotches reach down to the ventrals and lower. The rhomboidal blotches of the back touch with their corners. Thirty-two of these lie in front of the vent. Occasionally there is a little confusion in the relations of the blotches of the different series, but not much. The belly is yellowish white, with some triangular spots of black, giving it a speckled appearance. The head is smoky brown above as far down as the upper edges of the upper labials. The kiwer edges of these are yellow, with a black border on the hinder edge. The lower labials are similarly yellow, with black posterior edges. (Hurter).

Habits: This is a most aggressive snake, vicious and bad tempered. The author has seen it enter boats in which people were fishing to get at a fish.

Type locality: Arkansas River.

General distribution: Southern Illinois and Indiana, south to Texas, Louisiana and Alabama.

Alabama: Widely distributed over State.

Natrix rigida (Say) Cope
Coluber rigida, Say
 Striped Water Snake

Anal plate, divided	Upper labials, 7	Parietals, two
Caudals, 52-71	Largest upper labials, 5th and 6th	Postoculars, two
Frontals, one	Loreal, present	Preoculars, two
Prefrontals, two	Nasals, one	Scales, keeled
Lower labials, 11	Internasals, two	Scale row, 19
Largest lower labials, 5th and 7th	Nostril, in nasal	Ventrals, 132-137

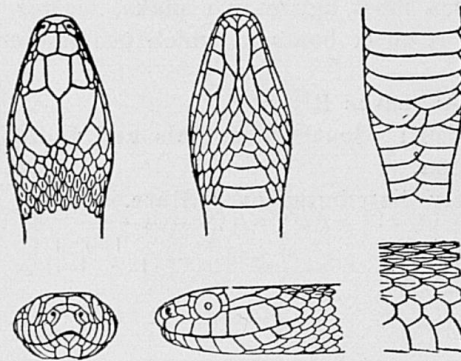


Figure 27. *Natrix rigida* (Say) Cope
 (After Cope)

Description: Dorsal surface greenish brown, with the lateral surface lighter brown. There are two narrow dark stripes on back. The ventral surface is yellow on which are two rows of blotches, extending as far as the anal plate. The head is uniform brown.

Habits: Similar to *N. cyclopium*.

Type locality: Southern States.

General distribution: The Carolinas to Florida and Alabama.

Alabama record: Montgomery County; Chastang, Mt. Vernon, Mobile County.

Natrix septemvittata (Say) Cope*Coluber septemvittatus*, Say*Natrix leberis*, Cope

Queen Snake, Moon Snake

Anal plate, divided	Upper labials, 6	Parietals, two
Caudals, 72-81	Largest upper labials, 5th and 6th	Postoculars, two
Frontals, one	Loreal, present	Preoculars, two
Prefrontals, two	Nasals, two	Scales, keeled
Lower labials, ten	Internasals, two	Scale row, 19
Largest lower labials, 5th and 6th	Nostril, between nasals	Ventrals, 143-150

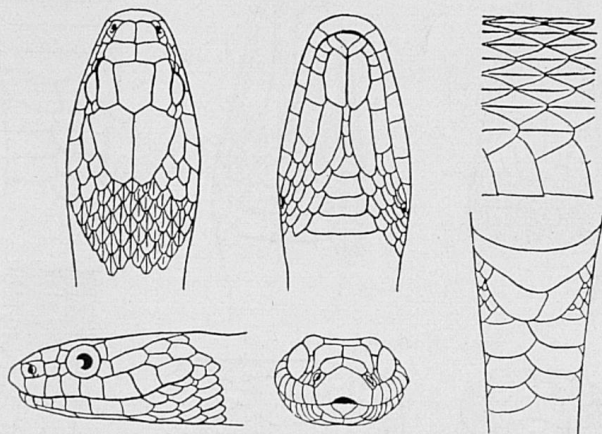


Figure 28. *Natrix septemvittata* (Say) Cope
(After Cope)

Description: Dorsal surface brown with a central black band and another band on each side running full length. Just below these lateral black bands is a yellow band on each side, and somewhat wider than the black bands. Just ventral to these is a wide brown band on both sides. Ventral surface yellow with two brown bands.

Habits: Similar to *N. cyclopium*.

Type locality: Pennsylvania.

General distribution: Central, Eastern and Gulf States.

Alabama records: Walker and Tuscaloosa Counties.

Natrix sipedon fasciata (Linne) Stejneger and Barbour
Natrix fasciata, Cope; *Tropidonotus fasciatus sipedon*, Boulenger
 Banded Water Snake, Moccasin

Anal plate, divided	Upper labials, 8	Parietals, two
Caudals, 62-74	Largest upper labials, 6th and 7th	Postoculars, three
Frontals, one	Loreal, present	Preoculars, one
Prefrontals, two	Nasals, one	Scales, keeled
Lower labials, ten	Internasals, two	Scale row, 23-25
Largest lower labials, 5th and 6th	Nostril, in nasal	Ventrals, 130-150

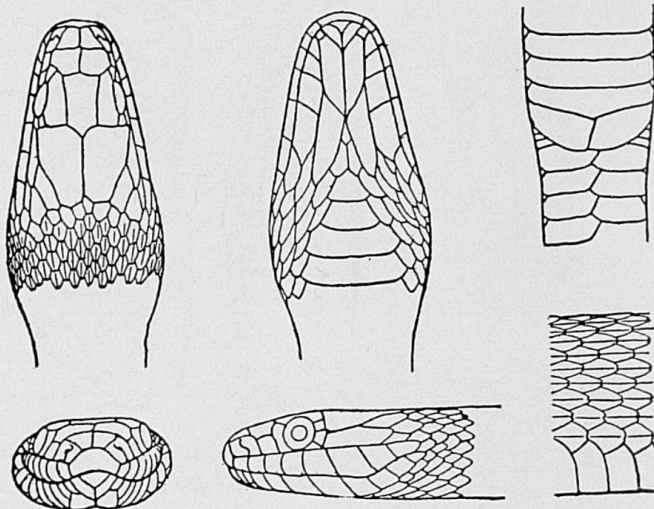
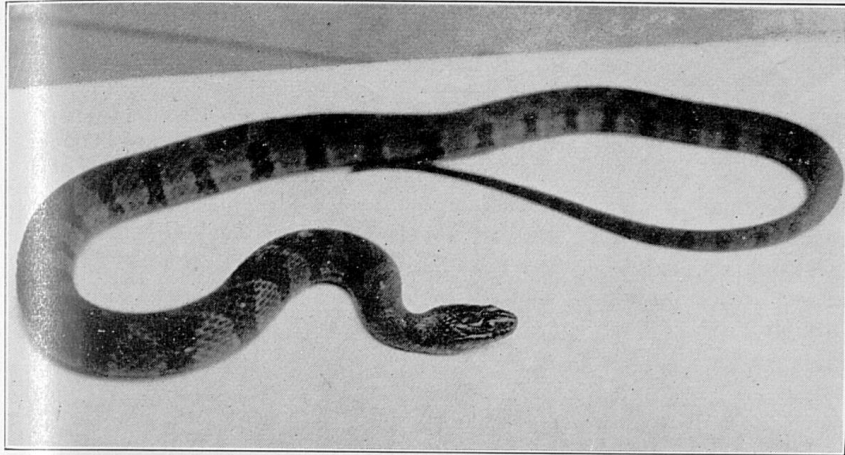


Figure 29. *Natrix sipedon fasciata* (Linne) Stejneger & Barbour
 (After Cope)

De
 long, s
 nating
 spots a
 the ven
 two to
 becomi
 Belly r
 numero
 scured
 part of
 labials,
 labials
 Ha
 Ty
 Ge
 ward u
 Al

PLATE 19



Natrix sipedon fasciata, (Linne)
From live specimen in the Museum.

Description: A dorsal series of large brown spots, three to five scales long, separated by light interspaces of one-half to two scales long. Alternating with the dorsal spots are lateral spots of the same color. These spots are one and one-half to two and one-half scales long, reaching into the ventrals. These side spots are separated by lighter interspaces from two to three scales long. Anteriorly the latter spots are often indistinct becoming frequently confluent with the dorsal spots, forming cross bands. Belly maculated by many brown spots bordered with black. Spots more numerous posteriorly. In old specimens the general color markings are obscured and the snake appears plain brown. Top of head brown. Upper part of upper labials brownish, like the head, lower part yellowish. Lower labials, chin and throat yellowish. Posterior edge of upper and lower labials with a dark streak. (Hurter).

Habits: Similar to *N. cyclopium*.

Type locality: Carolina.

General distribution: Virginia to Florida, west to Louisiana, northward up Mississippi Valley to Nebraska and Illinois.

Alabama: Common over State.

Natrix sipedon erythrogaster (Shaw) Forster
Natrix fasciata erythrogaster, Cope;
Coluber erythrogaster, Shaw;
Tropidonotus erythrogaster, Holbrook
 Red-Bellied Water Snake

Anal plate, divided
 Caudals, 64-85

Frontals, one
 Prefrontals, two
 Lower labials, 11
 Largest lower labials,
 6th and 7th

Upper labials, eight
 Largest upper labials,
 6th and 7th

Loreal, present
 Nasals, single
 Internasals, two
 Nostril, in nasal

Postoculars, three
 Preoculars, one

Supraoculars, two
 Scales, keeled
 Scale row, 23-25
 Ventrals, 121-125

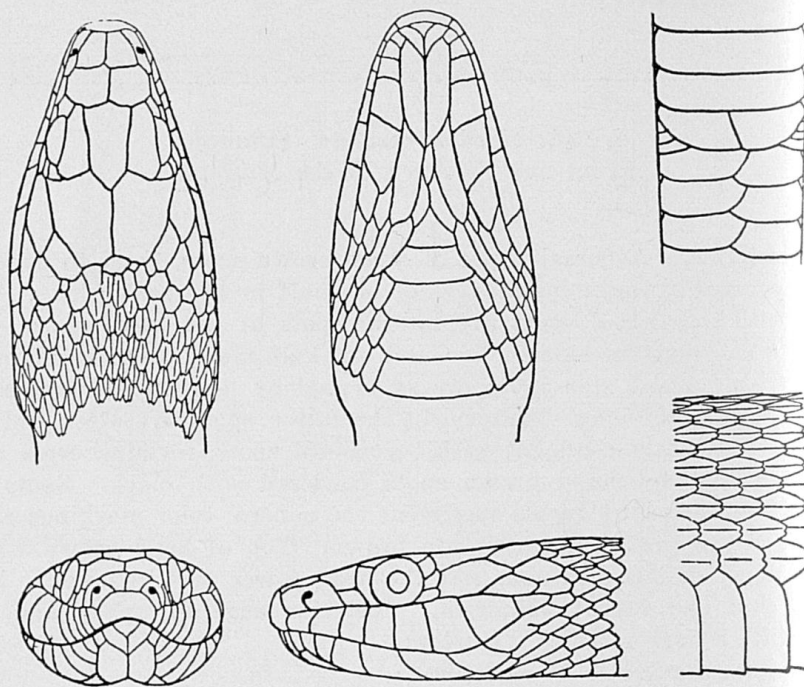


Figure 30. *Natrix sipedon erythrogaster* (Shaw) Forster
 (After Cope)

Description: Dorsal surface dark reddish brown, lateral surface lighter, abdomen yellow.

Habits: Similar to *N. cyclopium*.

General distribution: Some claim this is one and the same snake as *N. sipedon fasciata* and is only a color variety. Stejneger and Barbour give this status to the above snake. However, I believe these to be two valid species.

Alabama records: Tuscaloosa and Mobile Counties. Probably widely distributed over entire State.

Natrix taxispilota (Holbrook) Cope
Tropidonotus taxispilotus, Holbrook
 Water-Pilot

Anal plate, divided
 Caudals, 72-95
 Frontals, one
 Prefrontals, two
 Lower labials, eleven
 Largest lower labials,
 6th and 7th

Upper labials, 8
 Largest upper labials,
 6th and 7th
 Loreal, present
 Nasals, one
 Internasals, two
 Nostril, in nasal

Parietals, two
 Postoculars, three
 Preoculars, one
 Scales, keeled
 Scale row, 31-33
 Ventrals, 140-148

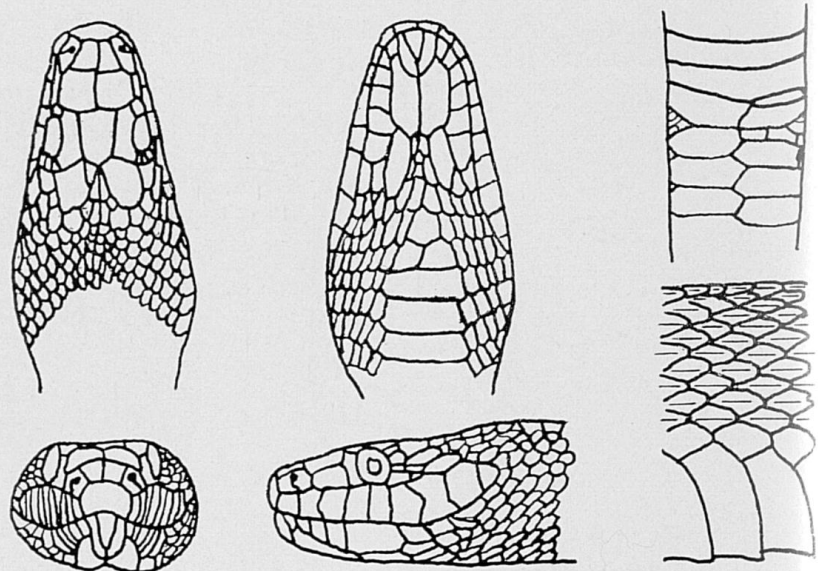


Figure 31. *Natrix taxispilota*, (Holbrook) Cope
 (After Cope)

Description: Rusty brown, with a series of black or dark brown blotches on the back, square in shape; in alternation with them on the sides is a similar series (about four scales wide and six scales high). The blotches of the back and of the sides are not in contact with each other. The effect of this pattern is a very strongly banded appearance, particularly upon the sides. The head is of the uniform colour of the body, and without markings.

Beneath, the colour is yellow, profusely and irregularly blotched with dark brown.

Young and half-grown specimens have a paler ground colour and black bands. They have the habit of coiling in nearly circular fashion, and when in this position assume a striking similarity to small examples of the banded rattlesnake (*Crotalus horridus*), hence the appellation of "Water rattler," which the negroes have given the species. (Ditmars).

One very large specimen at Mt. Vernon, Alabama, 6 feet long was in every way an intermediate between *rhombifera* and *taxispilota*. Scale row 31, ventrals 143. It would seem as if the division line between typical *rhombifera* and typical *taxispilota* lies somewhere between the Georgia line and the Mobile River (H. P. Löding).

The author fully agrees with Mr. Löding that this species is a color variation of *rhombifera* as in examining many to decide on differences for chart it was found that the variations of scalation was no greater between the two species than in specimens of the same species.

Habits: Similar to *N. Cyclopium*.

Type locality: South Carolina seaboard and the Altamaha River, Georgia.

General distribution: The Carolinas to Florida, west to Louisiana.

Alabama records: None. Although this snake has never been found in the State, undoubtedly it exists and for this reason it is included in this key.

Genus: STORERIA, Baird and Girard

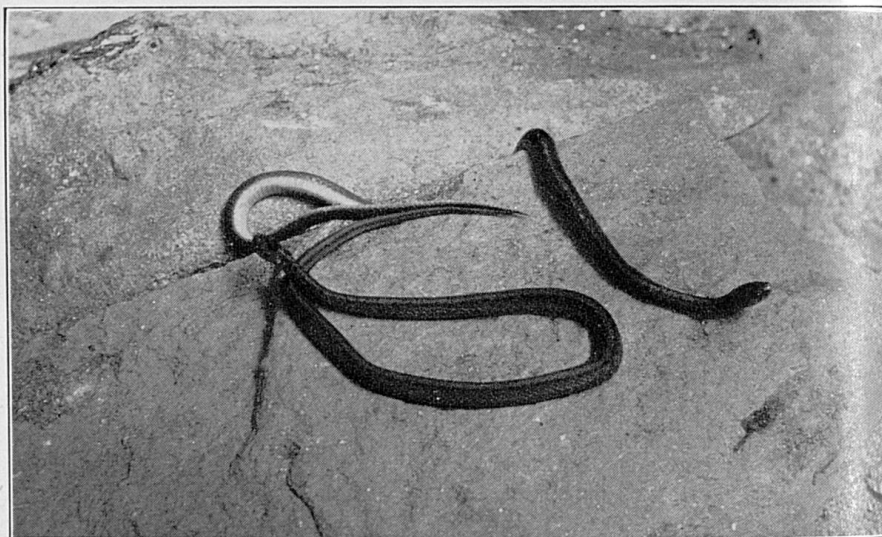
Storeria dekayi (Holbrook) Baird and Girard

Tropidonotus dekayi, Holbrook; *Storeria dekayi*, Cope

DeKay's Snake, Grass Snake, Brown Snake

Anal plate, divided	Upper labials, 7	Parietals, two
Caudals, 46-65	Largest upper labials, 5th	Postoculars, two
Frontals, one	Loreal, none	Preoculars, one
Prefrontals, two	Nasals, two	Scales, keeled
Lower labials, 7	Internasals, two	Scale row, 17
Largest lower labials, 5th	Nostril, between nasals	Ventrals, 120-145

PLATE 20



Storeria dekayi (Holbrook) Baird and Girard
Used through courtesy of New York Zoological Society.

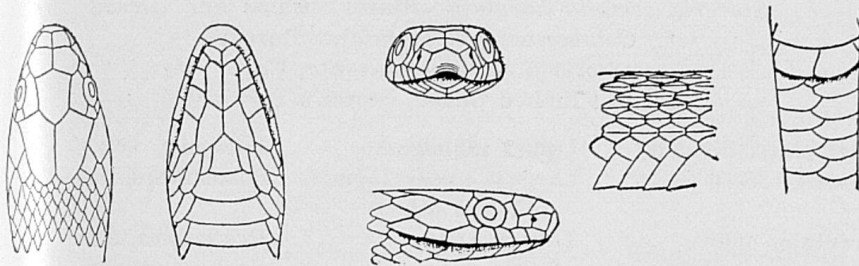


Figure 32. *Storeria dekayi* (Holbrook) Baird & Girard
(After Cope)

Description: Dorsal surface is grayish brown. In the midline there is a strip of paler brown surrounded by black dots on both sides. Ventral surface pink.

Habits: It leads a seclusive life under rocks, leaves and bark, feeding on insects, worms and slugs. It is seldom seen due to its habits. Occasionally on dark days or late in the afternoon it may be seen.

Type locality: Massachusetts and New York.

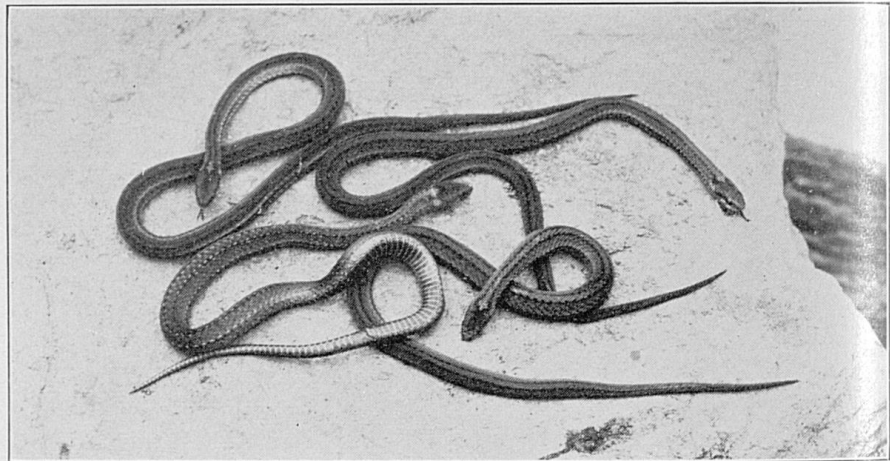
General distribution: Eastern North America to Mexico.

Alabama: Common over entire State.

Storeria occipito-maculata (Storer) Baird and Girard
Coluber occipito-maculata, Storer;
Storeria occipito-maculata, Cope
 Red Bellied Snake, Storer's Snake

Anal plate, divided	Upper labials, 6	Parietals, two
Caudals, 35-46	Largest upper labials, 5th and 6th	Postoculars, two
Frontals, one	Loreal, none	Preoculars, two
Prefrontals, two	Nasals, two	Scales, keeled
Lower labials, 7	Internasals, two	Scale row, 15
Largest lower labials, 5th and 6th	Nostril, in prenasal plate	Ventrals, 118-140

PLATE 21



Storeria occipito-maculata (Storer) Baird and Girard
 Used through courtesy of New York Zoological Society.



Fig

D
 to the
 blotch.
 H
 and ro
 seldom
 ered b
 T,
 G
 A

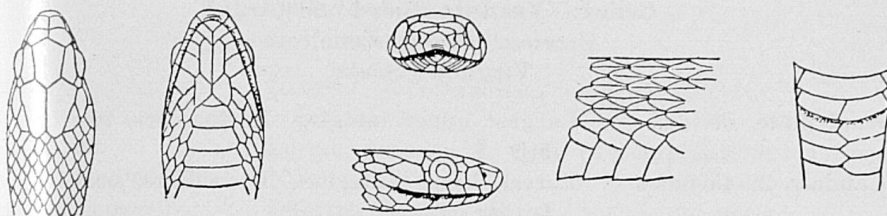


Figure. 33. *Storeria occipito-maculata* (Storer) Baird and Girard
(After Cope)

Description: Dorsal surface brown, sometimes gray. Just posterior to the head is a yellow blotch, and on each side of the neck another yellow blotch. Ventral surface is bright red.

Habits: This diminutive species burrows among the loose soil, leaves and rotten logs, feeding upon earthworms, snails and small insects. It is seldom seen except when turning over stones and logs. It may be considered beneficial to the farmer.

Type locality: Amhurst, Massachusetts.

General distribution: Eastern North America to Mexico.

Alabama: Over entire State.

Genus: VIRGINIA, Baird and Girard
Virginia elegans, Kennicott
 Virginia's Snake

Anal plate, divided	Largest upper labials, 5th	Postoculars, two
Caudals, 29-45 pairs	Loreal forms anterior border of eye	Preoculars, none
Prefrontals, two	Nasals, two	Supraoculars, two narrow
Lower labials, 7	Internasals, two	Scales, not keeled
Largest lower labials, 4th	Nostril, in prenasal	Scale row, 17
Upper labials, 6	Parietals, two long	Ventrals, 117-126

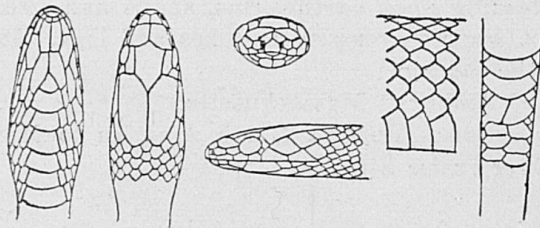


Figure 34. *Virginia elegans* Kennicott
 (After Cope)

Description. Dorsal surface greenish brown, ventral surface yellowish white.

Habits: This species is rather secretive and is seldom seen. It may be found under leaves, rocks and logs. Its food consist of insects and larvae, so it may well be considered beneficial to the farmer.

Type locality: Southern Illinois.

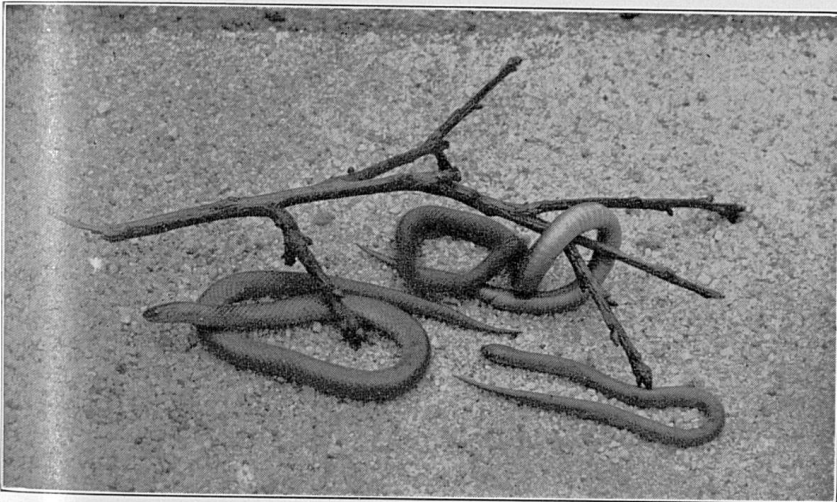
General distribution: Illinois, Indiana, Missouri, southward to Texas and eastward to Alabama.

Alabama records: Mobile County.

Virginia valeriae, Baird and Girard
Virginia's Snake

Anal plate, divided	Largest upper labials, 5th	Postoculars, two
Caudals, 32	Loreal, present	Preoculars, none
Prefrontals, two	Nasals, two	Supraoculars, two
Lower labials, six	Internasals, two	Scales, not keeled
Largest lower labials, 5th	Nostril, between nasals	Scale row, 15
Upper labials, six	Parietals, two	Ventrals, two

PLATE 22



Virginia valeriae, Baird and Girard
Used through courtesy of New York Zoological Society.

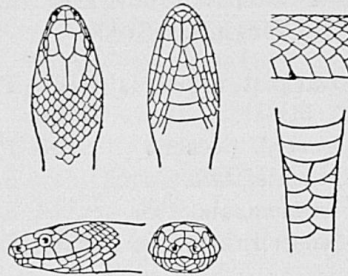


Figure 35. *Virginia valeriae* Baird and Girard
(After Cope)

Description: Dark grayish brown on the dorsal surface with two rows of black spots. Ventral surface yellowish. It may be different from *Carpophis* by the latter having a pink ventral surface.

Habits: This species burrows in the leaves and soft soil and may oftentimes be found under upturned bark and logs. It feeds on insects and larvae and thus is beneficial to man. It is entirely harmless.

Oviparous.

Type locality: Kent County, Maryland.

General distribution: New Jersey to South Carolina, west to Tennessee and Alabama.

Alabama records: Indian creek, Tuscaloosa County.

Anal p

Caudal

Prefron

Lower

Largest

5th

Upper

Genus: POTAMOPHIS, Fitzinger

Potamophis striatulus (Linne) Garman*Coluber striatulus*, Linne; *Haldea striatula*, Cope

Ground Snake, Worm Snake

Anal plate, divided	Largest upper labials, 4th and 5th	Postoculars, two
Caudals, 25-45	Loreal, present	Preoculars, none
Prefrontals, two	Nasals	Supraoculars, two
Lower labials, six	Internasals, single	Scales, keeled
Largest lower labials, 5th	Nostril	Scale row, 17
Upper labials, five	Parietals, two	Ventrals, 119-130

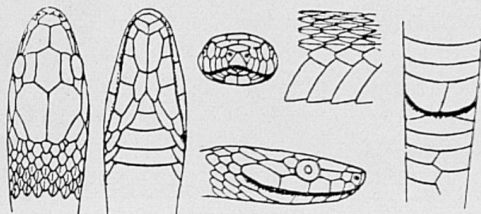
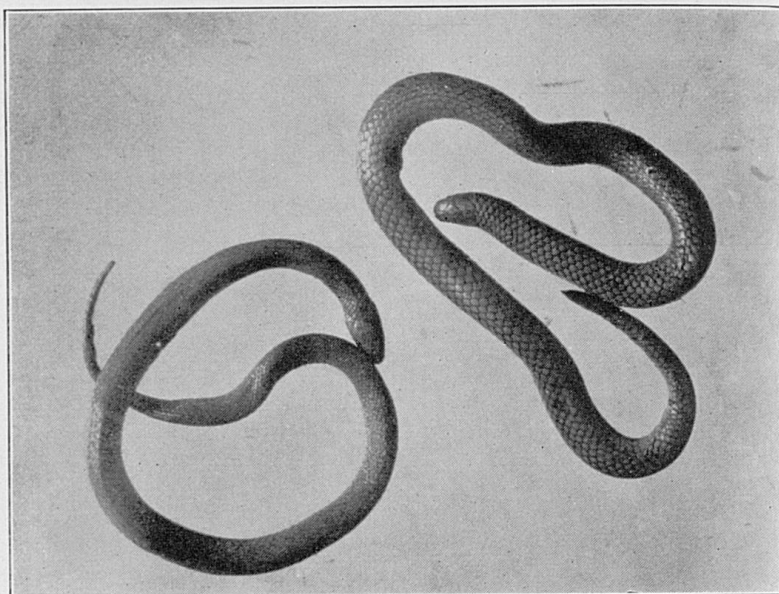


Figure 36. *Potamophis striatulus* (Linne) Garman
(After Cope)

PLATE 23



Potamophis striatulus (Linne) Garman
Dead specimens in the Museum.

Description: This snake scarcely ever attains the length of one foot. Dorsal surface is grayish to reddish brown. Ventral surface pink. Occasionally there is a light brown band over parietals to angle of mouth.

Habits: Beneficial to farmer as it feeds in insects. It has burrowing habits and is often found under logs and rocks. It prefers a damp locality.

Type locality: Carolina.

General distribution: Virginia to Minnesota and south to Gulf States.

Alabama: Possible over entire State.

Anal p
Caudal
Fronta
Prefron
Lower
Upper

Figur

Des
low strip
stripe is
pale yell
Hab
banks a
feed on
be count
Typ
Gen
Ala

Genus: THAMNOPHIS, Fitzinger

Thamnophis sackeni (Kennicott) Stejneger and Barbour*Eutaenia sackeni*, Kennicott

Ribbon Snake, Garter Snake

Anal plate, entire	Loreal, present	Postoculars, three
Caudals, 106-115	Nasals, two	Preoculars, one
Frontals, one	Internasals, two	Supraoculars, two
Prefrontals, two	Nostril, between nasals	Scales, keeled
Lower labials, 9	Rostral, normal	Scale row, 19
Upper labials, 8	Parietals, two	Ventrals, 156-178

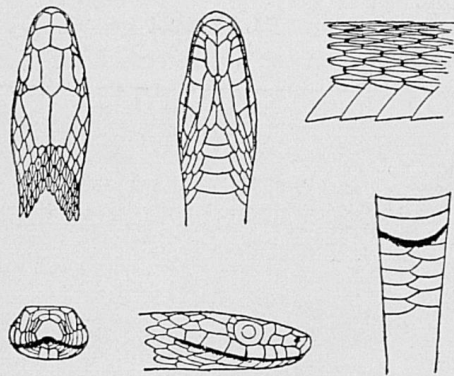


Figure 37. *Thamnophis sackeni* (Kennicott) Stejneger & Barbour
(After Cope)

Description: Green to dark brown on dorsal surface. There is a yellow stripe about two scales wide running the full length on each side. This stripe is generally on the 3rd and 4th scale rows. The ventral surface is pale yellow sometimes almost white.

Habits: The species is semi-aquatic; frequenting creek and pond banks and is often seen in the low lying bushes and undergrowth. They feed on cold blooded animals such as frogs, fish, toads, etc., and this cannot be counted beneficial to the farmer.

Type locality: Florida.

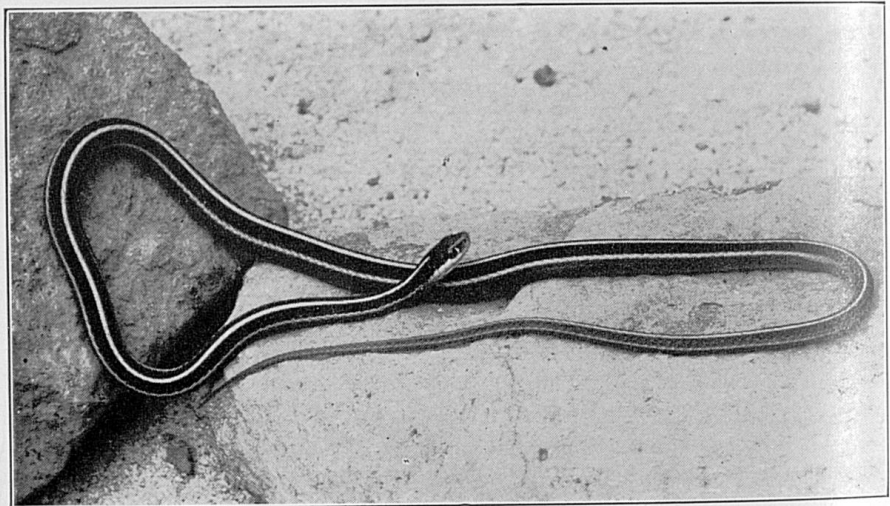
General distribution: Florida to southern Mississippi.

Alabama: Southern counties.

Thamnophis sauritus, (Linne), Stejneger
Eutaenia saurita; *Coluber saurita*, *Leptophis sauritus*,
Eutaenia saurita, Baird and Girard
 Ribbon Snake, Garter Snake

Anal plate, entire	Loreal, present	Supraoculars, two
Caudals, 115-118	Nasals, two	Rostral, normal
Frontals, one	Internasals, two	Scales, keeled
Prefrontals, two	Nostrils, between nasal	Scale row, 19
Lower labials, 10	Postoculars, 3	Tail, about $\frac{1}{4}$ entire length
Upper labials, 7	Preoculars, one	Ventrals, 156

PLATE 24



Thamnophis sauritus, (Linne), Stejneger
 Used through courtesy of New York Zoological Society.

Des
 distinct
 are ver
 ventral
 Hal
 animals
 entirely
 places.
 spring.
 TY
 Gen
 Ala
 bile cou

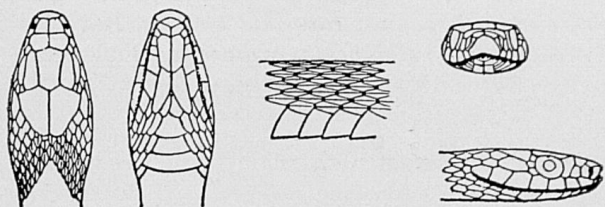


Figure 38. *Thamnophis sauritus* (Linne) Stejneger
(After Cope)

Description: Dorsal surface is a velvety brown or black with a very distinct yellow stripe down the midline and one on each side. These lines are very distinct and thus is given the common name ribbon snake. The ventral surface is a yellowish white.

Habits: This species like all the striped snakes feeds on cold blooded animals as frogs, fish, worms, etc., and is not beneficial to the farmer but entirely harmless. It takes the habits of water snakes and frequents damp places. The author saw this species catch a small salamander in a small spring. The snake dived as easily as any *Natrix*.

Type locality: Carolina.

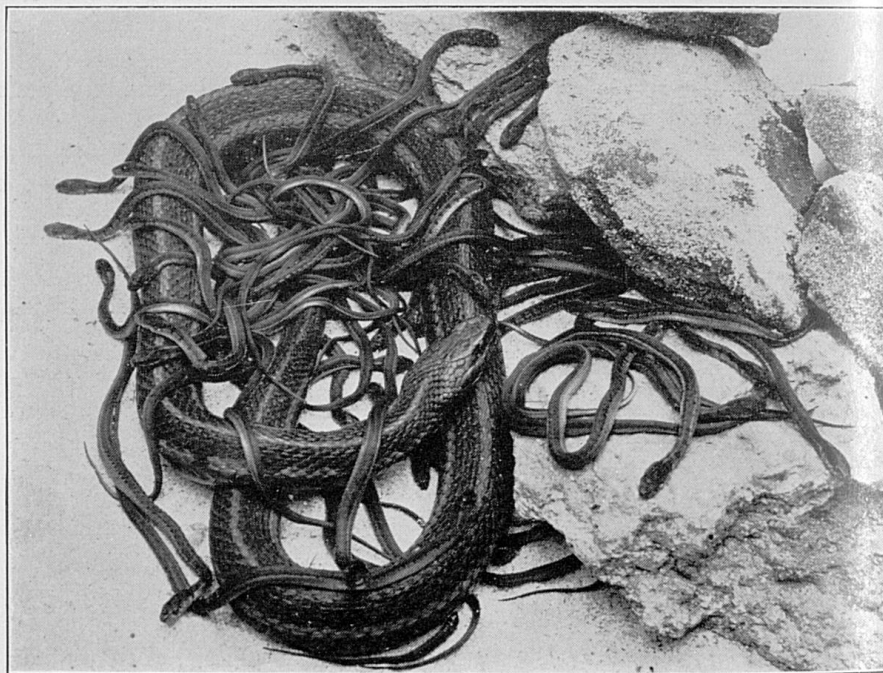
General distribution: Michigan to Georgia.

Alabama: Actual records in Talladega, Tuscaloosa, Barbour and Mobile counties but possibly over the entire State.

Thamnophis sirtalis sirtalis, (Linne) Garman
Eutainia sirtalis sirtalis, Linne; *Eutainia sirtalis*, Barird and Girard;
Tropidonotus sirtalis var. *ordinatus*, Boulenger
 Garter Snake

Anal plate, entire	Mental, small	Postoculars, 3
Caudals, 50-90	Nasals, two	Preoculars, one
Frontals, one	Internasals, two	Supraoculars, two
Lower labials, 7	Nostril, between nasals	Scales, keeled
Upper labials, 10	Rostral, normal	Scale row, 19
Loreal, present	Parietals, two	Ventrals, 140-170

PLATE 25



Thamnophis sirtalis sirtalis, (Linne) Garman
 Used through courtesy of New York Zoological Society.

PLATE 26



Thamnophis sirtalis sirtalis, (Linne) Garman
Used through courtesy of New York Zoological Society.

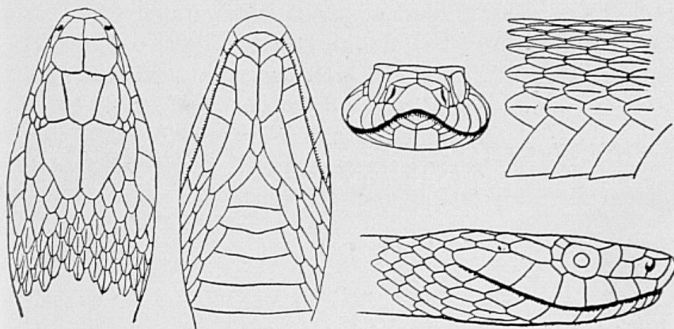


Figure 39. *Thamnophis sirtalis sirtalis*, (Linne) Garman
(After Cope)

Description: Dorsal surface changes from olive green to dark brown, the older specimens generally being darker. In the midline there is a greenish yellow line extending from head to tail. Parallel to this are two other stripes, one on each side which run the entire length. Between the central and lateral lines there are also two rows of black dots. There is generally a row of dots beneath the outside line. The ventral surface offers a great variety of coloration, oftimes one or all the stripes are absent.

Habits: This snake feeds on cold blooded animals, frogs, fish, worms, etc., it is therefore of no partiular value to the farmer although it is entirely harmless. It is possibly the most common snake seen in our wooded areas. It appears early in the spring and is late to hibernate in the fall.

Type locality: Canada.

General distribution: Eastern North America.

Alabama: Over entire State.

Anal

Cauda

Prefro

Lower

Large

4th

Upper

De

greenis

brown

Ha

farmer

is an e

howeve

Ty

Ge

A

sibly fo

Genus: TANTILLA, Baird and Girard
Tantilla coronata, Baird and Girard
 Crowned Tantilla

Anal plate, divided	Largest upper labials, 7th	Postoculars, two
Caudals, 41-51 pairs	Loreal, none	Preoculars, one
Prefrontals, two	Nasals, two	Supraoculars, two
Lower labials, 7	Internasals, two	Scales, not keeled
Largest lower labials, 4th	Nostril, in prenasal	Scale row, 15
Upper labials, 7	Parietals, two	Ventrals, 112-157

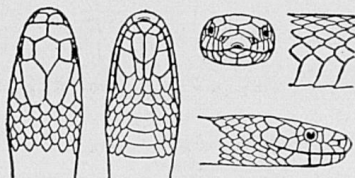


Figure 40. *Tantilla coronata* Baird and Girard
 (After Cope)

Description: Dorsal surface dark iridescent brown, sometimes a greenish red brown. Head much darker. Ventral surface pink. A blackish brown ring on neck.

Habits: This small snake feeds on insects and is thus beneficial to the farmer. It is a burrowing snake and found under rocks and limbs. This is an entirely harmless species, even though it carries fangs. The snake, however, is too small to be an offender to man.

Type locality: Kemper County, Mississippi.

General distribution: Southeastern United States.

Alabama records: Tuscaloosa, Mobile and Baldwin counties, and possibly found in most of the central and northern counties.

FAMILY ELAPIDAE

Micrurus fulvius (Linne)*Coluber fulvius*, Linne; *Elaps fulvius*, Cope

Coral Snake

Anal plate, divided	Largest upper labials, 6th	Postoculars, two
Caudals, 25-45 pairs	Loreal, none	Preoculars, one
Prefrontals, two	Nasals, two	Supraoculars, two
Lower labials, 7	Internasals, two	Scales, smooth
Largest lower labials, 4th	Nostril, in prenasal	Scale row, 15
Upper labials, 7	Parietals, two	Ventrals, 202-236

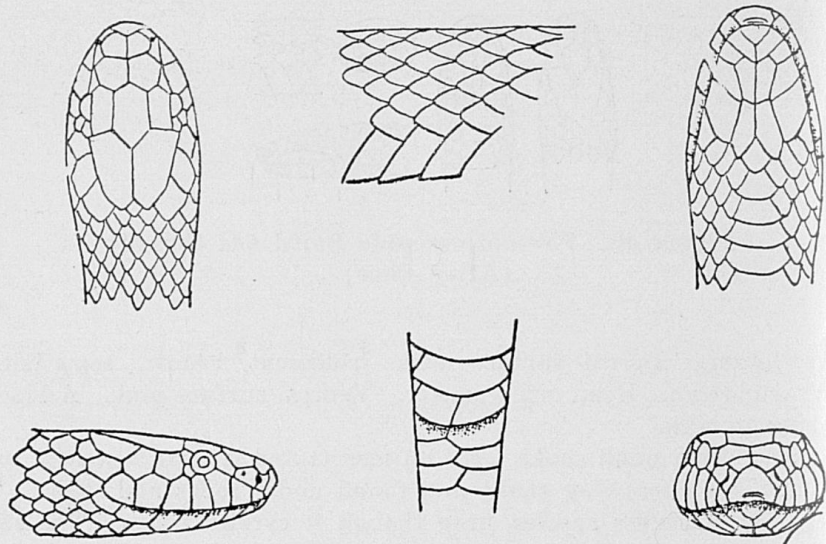


Figure 41. *Micrurus fulvius* (Linne) Stejneger & Barbour
(After Cope)

Des
mum be
yellow t
distingu
bering t
nonpoisc
Hab
It may k
but mus
Typ
Gen
States, I
Ala
Baldwin

PLATE 27



Micrurus fulvius, Stejneger and Barbour
Used through courtesy of New York Zoological Society.

Description: This species never attains any great length, the maximum being perhaps two feet. From head to tip of nose black followed by yellow then followed by red surrounded by narrow yellow bands. It may be distinguished quickly from non poisonous species which mimic it by remembering that the snout of the poisonous snakes is black, while that of the nonpoisonous varieties is red.

Habits: This snake is nocturnal and for this reason is seldom seen. It may be found under rocks and logs. It is not aggressive toward humans but must be considered as a deadly snake.

Type locality: Carolina.

General distribution: South Carolina, Mississippi to Florida, Gulf States, Mexico and Central America.

Alabama: Actual records: Etowah, Greene, Tuscaloosa, Mobile and Baldwin counties, but possibly in entire southern part of State.

FAMILY CROTALIDAE

Genus: AGKISTRODON, Beauvois

Agkistrodon mokasen, Beauvois*Ancistrodon contortrix*, Baird*Boa contortrix*; *Ancistrodon atrofucus**Scytale contortrix*; *Enchis controtrix*

Copperhead

Anal plate, undivided	Loreal, one present	Parietals, 2-4
Anterior chin shields, less than posterior ones	Nasals, two	Supraoculars, two
Caudals, 31-52	Internasals, two	Scales, keeled
Frontals, one wide	Nostril, between nasals	Scale row, 23
Lower labials, 10	Preorbitals, three	Tail $\frac{1}{8}$ total length
Upper labials, 8	Postorbitals, 3-4	Ventrals, 145-155

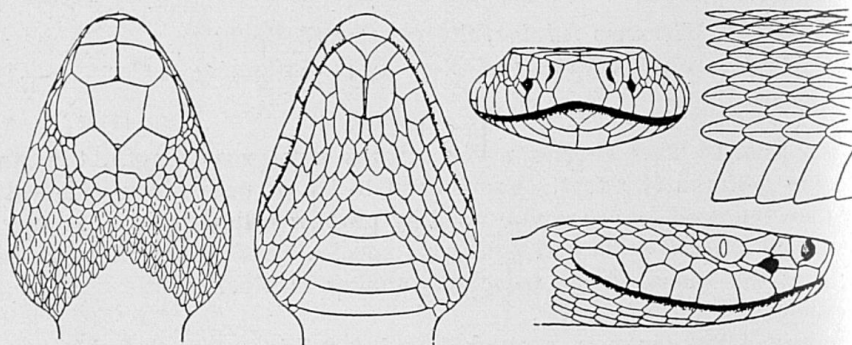


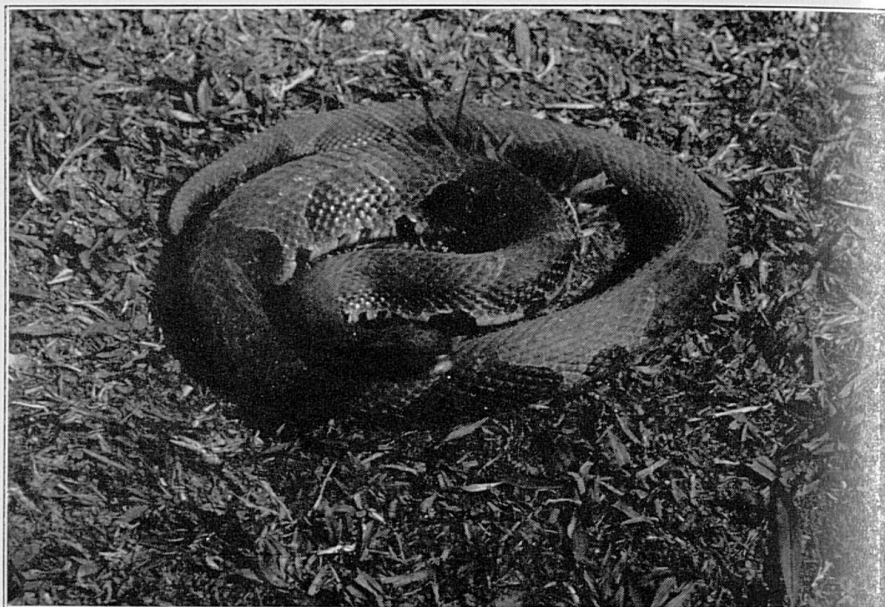
Figure 42. *Agkistrodon mokasen*, Beauvois
(After Cope)

PLATE 28



Agkistrodon mokasen, Beauvois
From live specimen in the Museum.

PLATE 29



Agkistrodon mokasen, Beauvois
From live specimen in the Museum.

Description: The dorsal surface is light brown and copper color, the head generally being bright copper, thus the name "copperhead." Darker brown blotches form dumb bells across the back, the contracted portion being over the vertebral column. Sometimes these brown spots do not continue and meet the one on the opposite side, or they may alternate. The ventral surface is a dull yellow with dark blotches on both sides.

Habits: This serpent, which is sometimes referred to as the highland moccasin or rattle snake pilot, frequents rocky territory, often being found by turning over boulders. This is a very poisonous snake for its size, and it gives no warning before striking. It is to be considered as very dangerous. However, this snake will remain quiet or glide away if undisturbed.

Oviparous.

Distribution: Widely throughout the State.

Anal p
Anteri
larg
Cauda
Fronta
Prefro
Lower
Larges
3rd



De
black.
about t
become
dorsal s
is a bla
is dark
Ha
often a
rivers,
they co
face is
into the
truder.
killed.
Dis

Agkistrodon piscivorus (Lacepede) Cope
Ancistrodon piscivorus, Lacepede; *Crotalus piscivorus*, Lecepede
Natrix piscivorus, Merrem; *Coluber aquaticus*, Shaw;
Toricophis piscivorus, Baird and Girard
 Cotton Mouth Moccasin, Water Moccasin

Anal plate, entire	Upper labials, eight	Postoculars, 2-3
Anterior chin shields, larger than posterior	Mental, small	Preoculars, 2-3
Caudals, 37-48	Internasals, two	Supraoculars, two
Frontals, one, broad	Nasals, two	Scales, keeled
Prefrontals, two	Nostril, between nasals	Scale row, 25
Lower labials, 10-11	Rostral, large	Tail, 1/7 total length
Largest upper labials, 3rd	Parietals, 2-4	Ventrals, 130-147

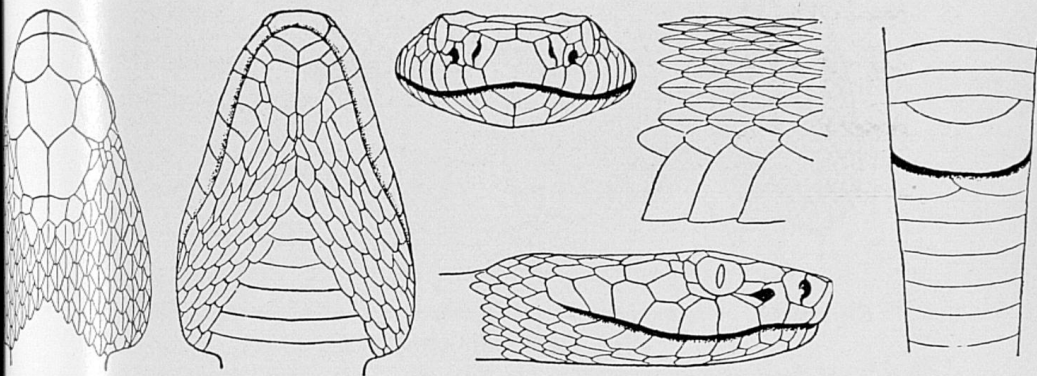


Figure 43. *Agkistrodon piscivorus* (Lacepede) Cope
 (After Cope)

Description: On the dorsal surface this snake is dark brown and black. It often appears to take on a muddy tinge. Crossing the body are about twelve to fifteen wide black bands inclosing the brown blotches, which become wider at each side. The head is solid dark brown or black on the dorsal surface. A yellow band extends from eye to neck. Above this band is a blackish streak. Ventral surface is yellow with blotches of brown. Tail is dark on both sides.

Habits: This is one of the largest poisonous snakes in America. It often attains the length of four feet. It frequents marshes, creeks and rivers, feeding on fish, frogs, birds and the like. As a person approaches they commonly open their mouths in readiness for striking. The inner surface is white, thus the name "cotton mouth." Occasionally they will slide into the water but more often they retain their position as if to dare an intruder. Due to the fact that they are poisonous and eat fish they should be killed.

Distribution: Along waterways over practically the entire State.

Genus: *SISTRURUS* Garman

Sistrurus catenatus catenatus (Rafinesque) Garman
Sistrurus catenatus; *Crotalus tergeminus*; *Crotalophorus tergeminus*;
Crotalophorus kirtlandii; *Crotalophorus massasaugus*;
Crotalus massasaugus;
 Massasauga

Anal plate, whole
 Caudals, 21-31
 Frontals, one broad
 Prefrontals, two
 Lower labials, 12-15

Upper labials, 10-13
 Loreal, one irregular
 Nasals, two
 Internasals, two
 Parietals, two

Supraoculars, two
 Scales, keeled
 Scale row, 25
 Rattles, larger than in
S. miliarius
 Ventrals, 136-153

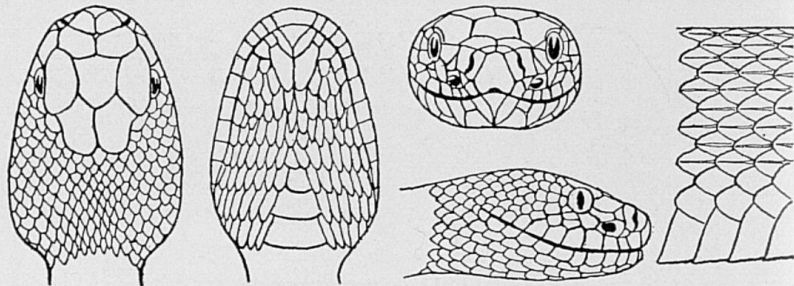


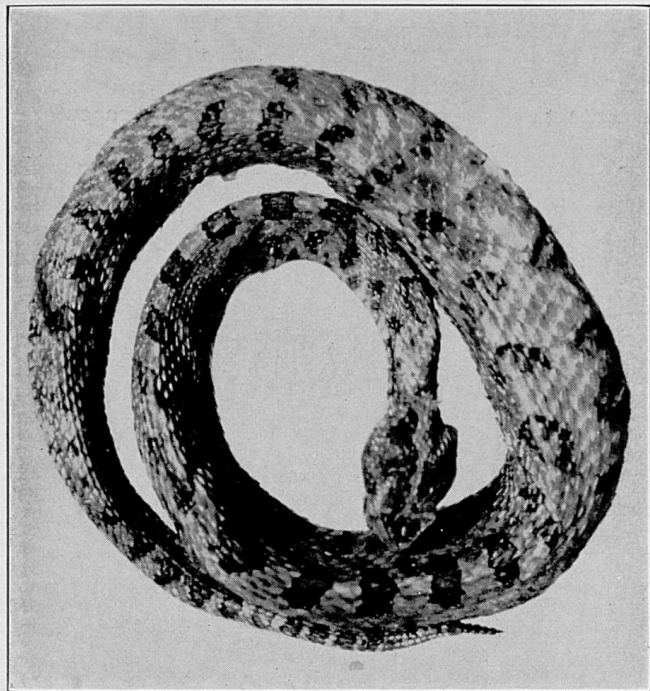
Figure 44. *Sistrurus catenatus catenatus* (Rafinesque) Garman
 (After Cope)

Preserve

Desc
 brown d
 gins. Th
 The upp
 white ext
 mouth.

Habi
 Type
 Gene
 northwa
 Alab
 H. H. Sm

PLATE 30



Sistrurus catenatus catenatus (Rafinesque) Garman

Preserved specimen in the Museum and the only one ever reported in this State.

Description: On dorsal surface brown, with about 30-36 deep chestnut brown dorsal blotches, blackish externally and with yellowish white margins. Three lateral series of brown blotches alternate with the dorsal ones. The upper series is generally much paler. A narrower band of yellowish white extends from the posterior nasal below the orbit to the angle of the mouth. This species is poisonous.

Habits: Approaches that of *S. miliarius*.

Type locality: Prairies of upper Missouri.

General distribution: Western New York, through Ohio to Nebraska, northward into Michigan and Ontario, southward to Kansas and Alabama.

Alabama records: Only one, Pratt's Ferry, Bibb County, collected by H. H. Smith.

Sistrurus miliarius, Linne; *Crotalus miliarius*, Linne;
Crotalophorus miliarius, Gray; *Caudisona miliara*, Fitzinger
 Ground Rattler, Pigmy Rattler

Anal plate, undivided	Upper labials, 10-13	Postoculars, three
Caudals, 21-23	Loreal, small	Preoculars, two
Eyes, not in contact with upper labials	Nasals, two	Supraoculars, two
Frontals, one	Internasals, two	Scales, keeled
Prefrontals, two	Rattles, very small	Scale row, 21-23
Lower labials, 12-15	Rostral, normal	Ventrals, 127-140

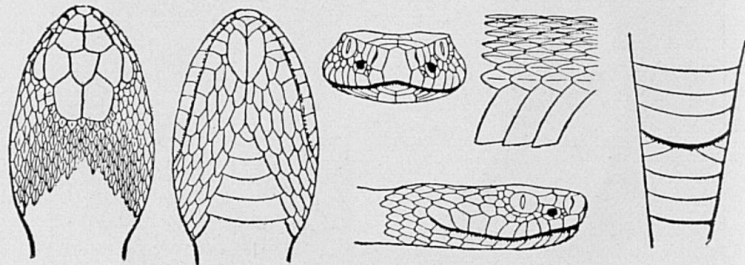


Figure 45. *Sistrurus miliarius* (Linne) Garman
 (After Cope)

Description: Brownish, gray to ground color on dorsal surface. There are between thirty-eight and forty-five darker blotches on back from head to tail. A narrow black band encircle blotches. A dark streak with a light streak beneath extends from below center of eye to angle of mouth.

Habits: This serpent is often found in pine woods among the rocks and leaves. It is a small snake and never attains very great length. The rattles are very small and cannot be heard very far. It is poisonous.

Oviparous.

Its food consists mainly of frogs and small rodents.

Distribution: New England to Northern Florida, east to Oklahoma.

Alabama: Once common in Alabama pine lands but more scarce now. Rather widely distributed over the State.

Genus: CROTALUS, Linne
Crotalus adamanteus, Beauvois
 Diamond Back Rattler

- | | | |
|--------------------|-------------------------------|--|
| Anal plate, entire | Loreal pit key, large | Postoculars, large number of small scales behind and below eye |
| Caudals, 16-31 | Nasals, two | Preoculars, one |
| Lower labials, 16 | Internasals, two, small | Scales, keeled |
| Upper labials, 16 | Nostril, very large | Scale row, 25-29 |
| Loreals, two | Neck, constricted behind head | Ventrals, 168-179 |

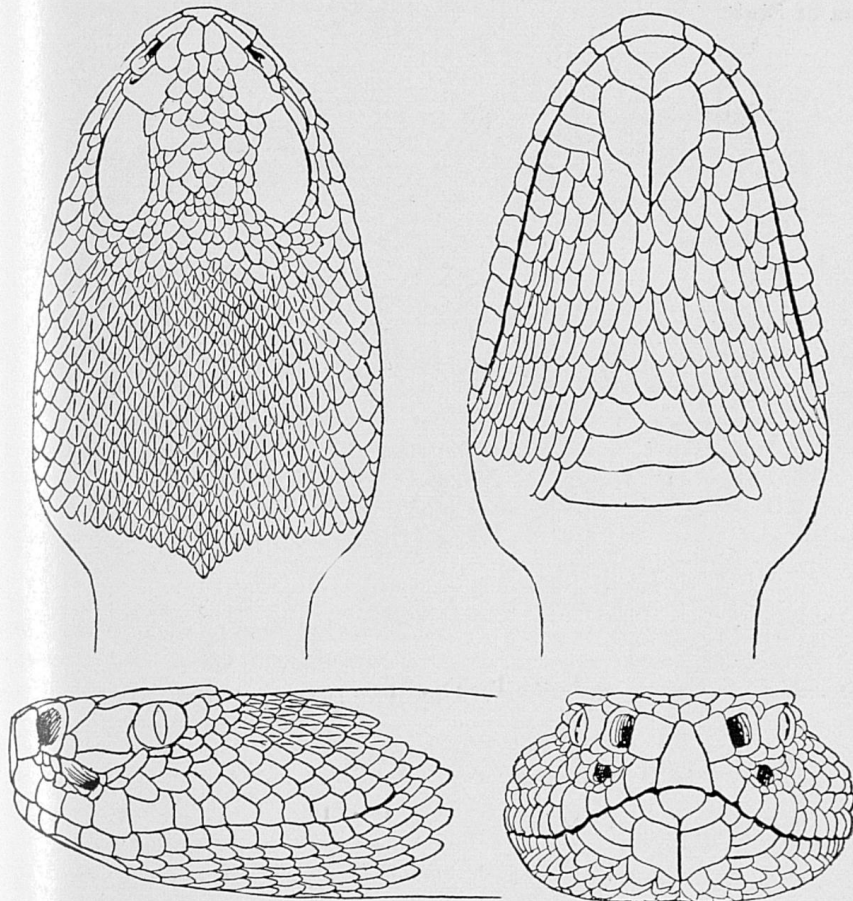


Figure 46. *Crotalus adamanteus* Beauvois
 (After Cope)

Description: Gray to brown on dorsal surface, with very distinct diamonds marking which are much darker, often black. These are bordered by yellow, generally about one scale wide. The tail does not have the characteristic diamonds as they fuse to form cross bands.

Habits: This is one of the most vicious and bravest snake in America. They will not retreat at approaching danger. This species strikes from the coiled position and is very accurate, seldom missing its goal. This species largely inhabits the lowlands and swamps, feeding mainly on rabbits. They will not feed on birds, so far as is known.

Type locality: United States.

General distribution: Southern North Carolina to Florida, westward to Louisiana and Arkansas.

Alabama: Mobile and Baldwin counties, rare, but possible over large area of State.

Timb

Anal p
CaudalEye, se
labiaHead s
ricalLower
Upper

Crotalus horridus, Linne

Crotalus durissus, *Candisona horrida*, *Crotalophorus horridus*;

Vipera candisona americana

Timber Rattler, Banded Rattler, Chevron Rattler, Canebrake Rattler,
Velvet Tail Rattler

Anal plate, undivided	Loreal, present	Supraoculars, two
Caudals, 18-25	Loreal pit, in margin off preorbital	Scales, keeled
Eye, separated from labials by small scales	Nasals, two	Scale row, 23-25
Head scales, unsymmet- rical	Neck, contracted behind head	Snout, blunt
Lower labials, 18	Nostril, in postnasal	Tail, short, blunt
Upper labials, 15	Preoculars, two	Ventrals, 18-25

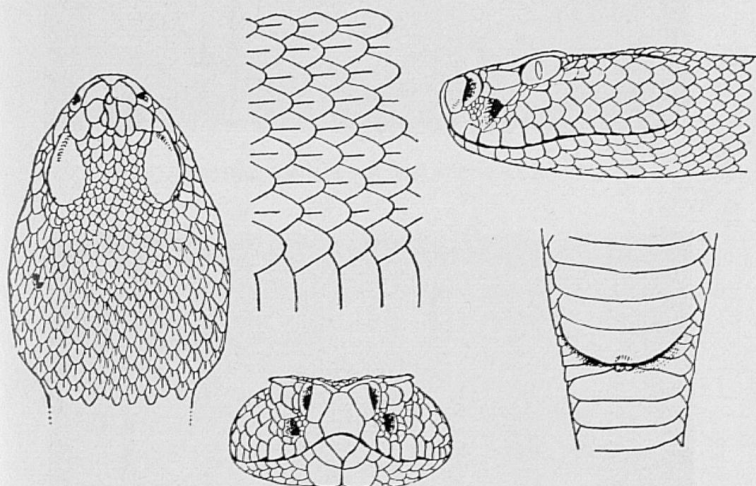


Figure 47. *Crotalus horridus*, Linne
(After Cope)

PLATE 31

A. *Crotalus horridus*, LinneB. *Crotalus horridus*, Linne
From live specimens in the Museum.

Desc
brown, c
stripes o
from abo
surface y
Hab
the warn
feed on r
a very p
the copp
Type
Gene
Alab
Possible

Description: The dorsal surface is a yellowish brown, often dark brown, crossed by transverse "V" bands of a darker brown to black. These stripes or bands are bordered with black and then yellow. Head is uniform from above. Tail is dark brown to black in adults. Rattles large. Ventral surface yellowish green with dark blotches.

Habits: This species inhabits rocky bluff and hillsides, often lying on the warm rocks. They also frequent the swamp lands of the State. They feed on rabbits and rodents, and spend a somewhat sluggish life. Although a very poisonous and dangerous snake they are a much better sport than the copperhead or cotton mouth, for they usually rattle before striking.

Type locality: America.

General distribution: Maine to Georgia, westward to the Great Plains.

Alabama records: Tuscaloosa, Bibb, Hale, Mobile and Monroe counties.
Possible over entire State.



CLASS REPTILIA

SUBCLASS DIAPSIDA

ORDER LORICATA

FAMILY CROCODYLIDAE

Family: CROCODYLIDAE

Genus: CROCODYLUS, Laurenti (Crocodylus)

Crocodylus acutus, Cuvier*C. americanus*, Cope

Only one specimen of this species has ever been found in this State. This specimen is now in the Alabama State Museum, the gift of Dr. T. S. Van Aller. This species is easily distinguished from the alligator by its narrow head and sharp snout, in contrast to the broad head and rounded snout of the alligator. There is no bony nasal septum in this species while in the alligator there is. Anterior foot five toes, three claws. Posterior foot four toes three claws.

Type locality: San Domingo.

General distribution: Southern Florida and tropical America.

Alabama records: One specimen recorded. Mobile, Alabama.

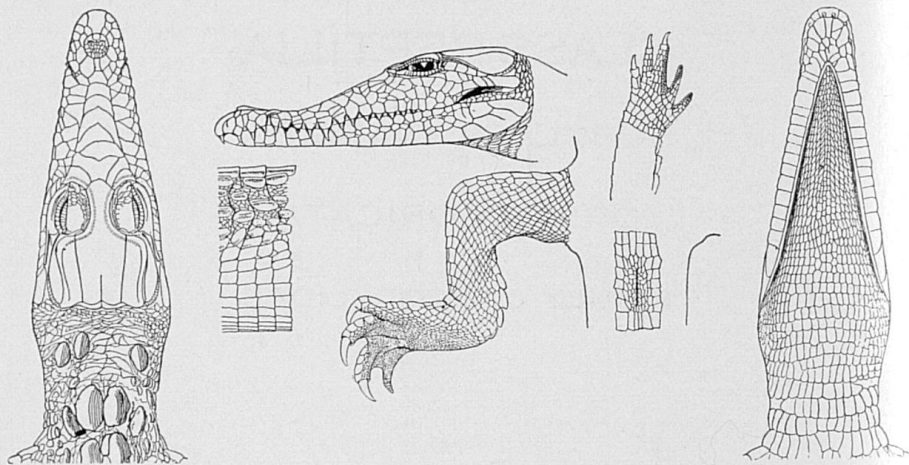


Figure 48. *Crocodylus acutus*, Cuvier
(After Cope)

Genus: ALLIGATOR, Cuvier
Alligator mississippiensis (Daudin) Gray

There seems little need to describe this species as it is easily recognized, being distinguished from the crocodiles, which are doubtful inhabitants of the State, by methods described under *Crocodylus*.

Habits: This species inhabits the rivers, ponds and lakes in the southern part of the State, often being seen on the bank or swimming in the water. It seems that there is much fear of them especially among the colored natives. This fear is more or less unwarranted as it is very doubtful if they will attack a person, especially an adult, unless cornered.

They have very little choice as to their food, feeding on earthworms, insects, reptiles, amphibians, fish, mammals, birds as well as vegetable matter. They attain a length of fourteen feet or possibly more.

Type locality: "Les bords du Mississippi."

General distribution: Rivers and swamps of the coastal plains from North Carolina to Florida, Oklahoma and Texas.

Alabama records: Common in coast strip and lower delta, and rarely farther up the rivers than seventy-five miles. The author has seen specimens on the Alabama River as far north as Claiborne, Monroe County, and on the Tombigbee at Coffeeville, Clark County.

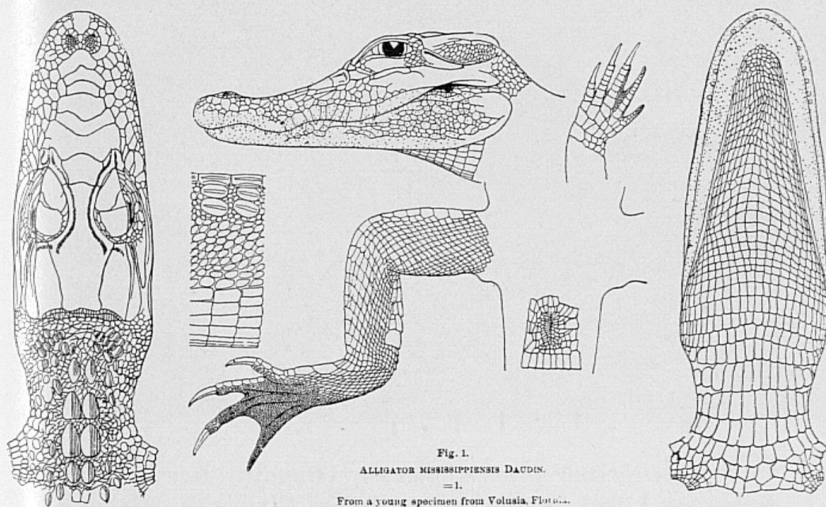
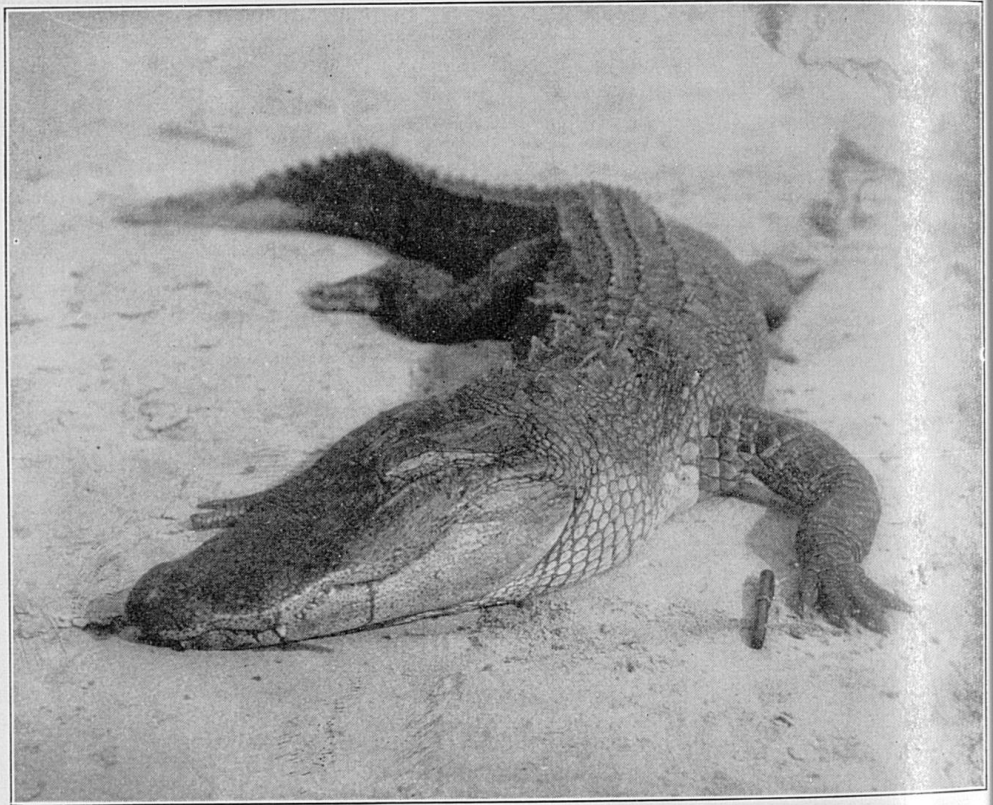


Fig. 1.
 ALLIGATOR MISSISSIPPIENSIS DAUDIN.
 = 1.
 From a young specimen from Volusia, Florida.

Figure 49. *Alligator mississippiensis* (Daudin) Gray
 (After Cope)

PLATE 32



Alligator mississippiensis, (Daudin) Gray
Specimen killed by the author below Claiborne, Alabama.

CLASS REPTILIA
SUBCLASS PARAPSIDA
ORDER SQUAMATA
SUBORDER SAURIA

Family: IGUANIDAE

Genus: ANOLIS, Daudin
Anolis carolinensis, Voigt
 American Chameleon

This is one of the most beautiful species in the State. Usually when undisturbed it is a brilliant green. When frightened it generally turns to a brown color. There is a gradual grading from green thru yellow to brown. The common idea that they will assume any hue similar to that on which they are placed is perhaps somewhat exaggerated. In winter and on cold days usually brown, in summer and on hot days usually green, though often brownish on the trunks of trees. This species is very slender and attenuated, the tail being nearly twice the body length. Five toes on each foot. The second toe on the medial side of the hind foot is very long. The male chameleon has a pouch under the throat which it inflates, showing a brilliant red. This species feeds on insects only.

Oviparous.

The anal plate has the posterior border lined with small scales longer than wide. Upper labials ten; lower labials eleven. The toes are decidedly lobulated especially one next to the thumb digit.

Type locality: Carolina.

General distribution: North Carolina to Florida and westward through the Gulf region to the Rio Grande.

Alabama records: Widely distributed throughout entire State.

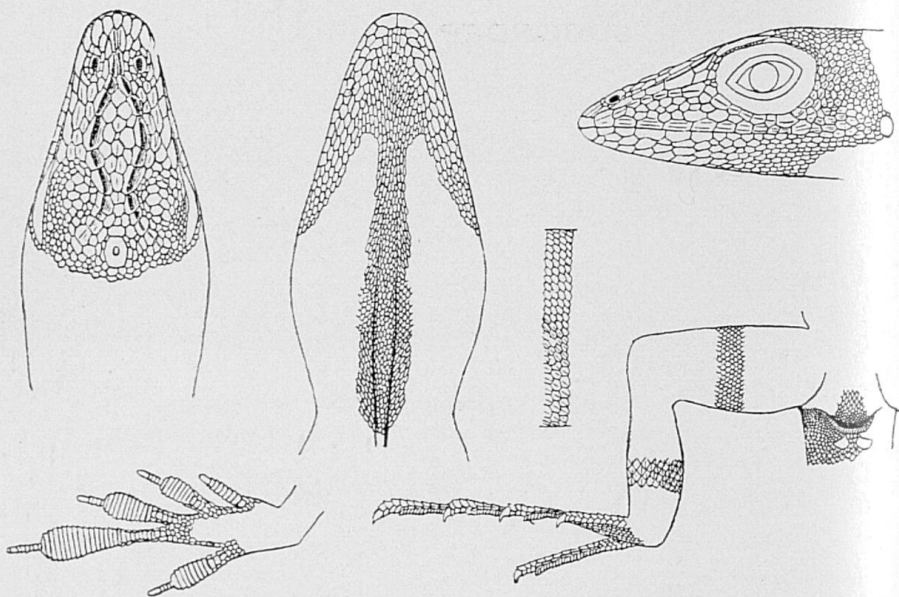


Figure 50. *Anolis carolinensis*, Voight
 (After Cope)

Genus: SCELOPORUS, Wiegmann

Sceloporus spinosus floridanus (Baird) Stejneger

Spiny Swift, Florida Swift

Dorsal surface gray to greenish yellow. There are a number of black bands on the back, on the tail they appear as rings. The ventral surface is a yellowish green. On the male specimens near the anterior end of the abdomen there is a bright purple blotch bordered with black. This species gets the name Spiny Swift from the scales which are attenuated, markedly keeled and ending in a spine. It lives entirely on insects.

Type locality: Pensacola, Florida.

General distribution: New Mexico to western Florida.

Alabama records: Elamville, Barbour County; Mobile and Baldwin counties. Possibly over entire southern part of State.

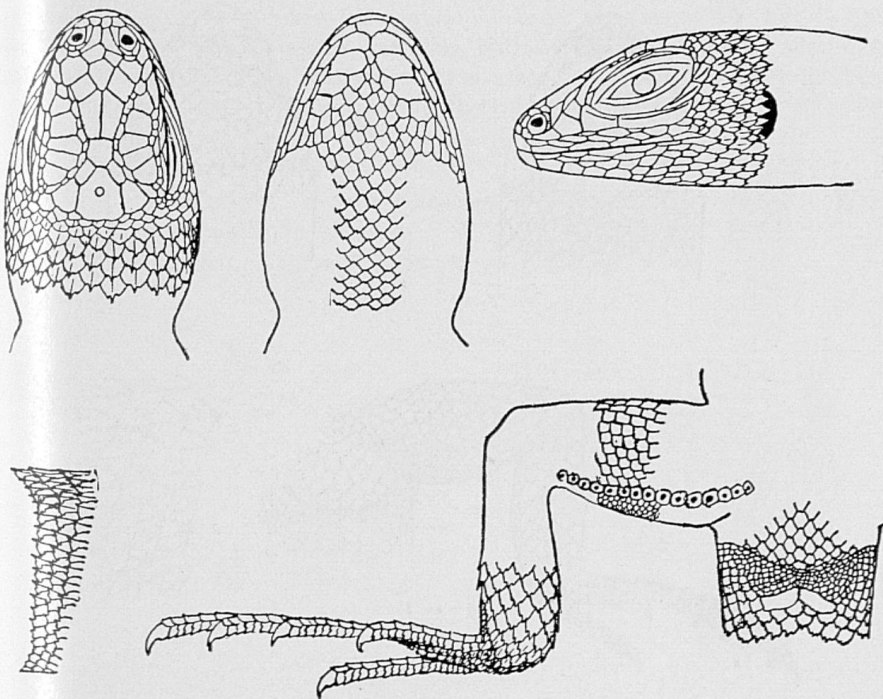


Figure 51. *Sceloporus spinosus floridanus* (Baird) Stejneger
(After Cope)

Sceloporus undulatus (Latreille) Wiegmann
Fence Lizard, Common Swift, Alligator Lizard

This species resembles closely the *Sceloporus spinosus floridanus*. The scales in this species are not markedly spined as in the already described species. The dorsal surface is gray to brownish green and also has on the back many cross bands of black. The male has blue and black blotches on the throat and each side of the ventral surface. These are not present in the female.

Very common on tree trunks, fences, etc. It is always busy stalking insects, and may be seen in the southern part of the State any warm day through winter months. Reaches the length of six inches.

Type locality: "Les grands bois de la Caroline."

General distribution: New Jersey to Florida and Alabama.

Alabama records: Tuscaloosa, Greene, Montgomery, Mobile and Baldwin counties, over State.

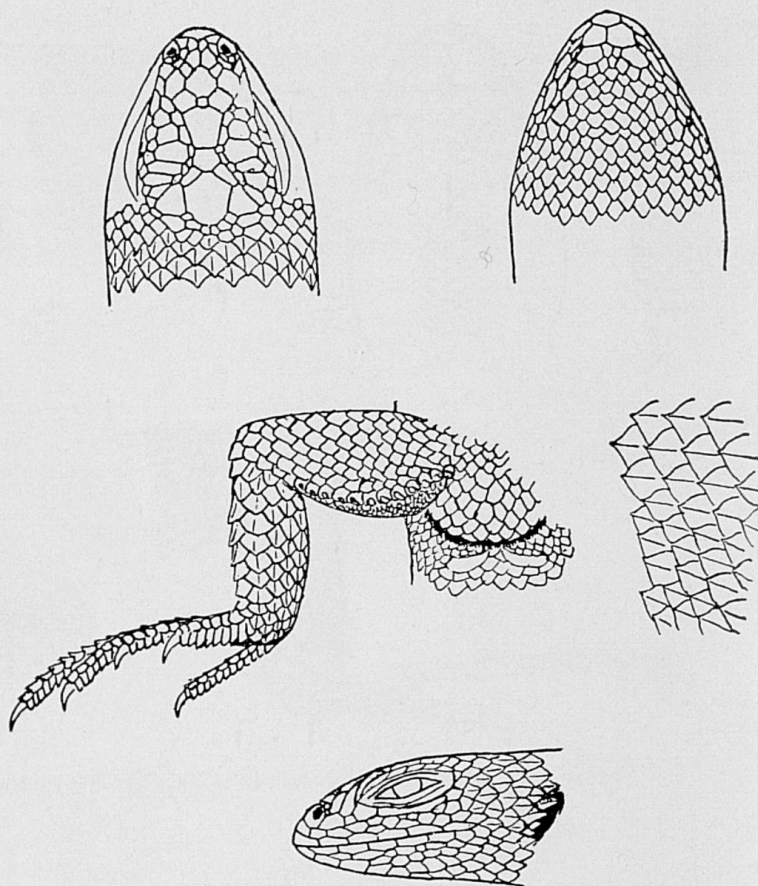


Figure 52. *Sceloporus undulatus* (Latreille) Wiegmann
(After Cope)

Family: ANGUIDAE

Genus: OPHISAURUS, Daudin

Ophisaurus ventralis (Linne) Daudin

Glass Snake, Joint Snake

This is one of the most popularized "snakes" in the United States. In reality this is not a snake but a lizard whose limbs have become vestigial, that is, it has no legs. The popularized idea that this species breaks into several parts which reunite, is untrue. Like many other lizards this species, on being caught, struck or even frightened may discard all or part of its tail, which constitutes more than half the full length. It has the ability to regenerate to a large degree a new tail, although the new one will always be blunt. On one of the early American colony flags was a picture of this reptile with the following inscription below, "United we live, divided we die."

This species is easily recognized from other lizards in that it has no legs. It may also be quickly distinguished from all snakes in that it has movable eye lids and an auditory meatus, both of which snakes do not have, while the form of head and body scalation also differs greatly from snakes.

The "glass snake" is a burrowing lizard in light dry soil. It lives on worms and insects. It grows to a length of nearly thirty inches.

Type locality: Carolina.

General distribution: North Carolina to Florida, to Nebraska, Wisconsin and Illinois, south to Mexico.

Alabama records: Common over most of State.

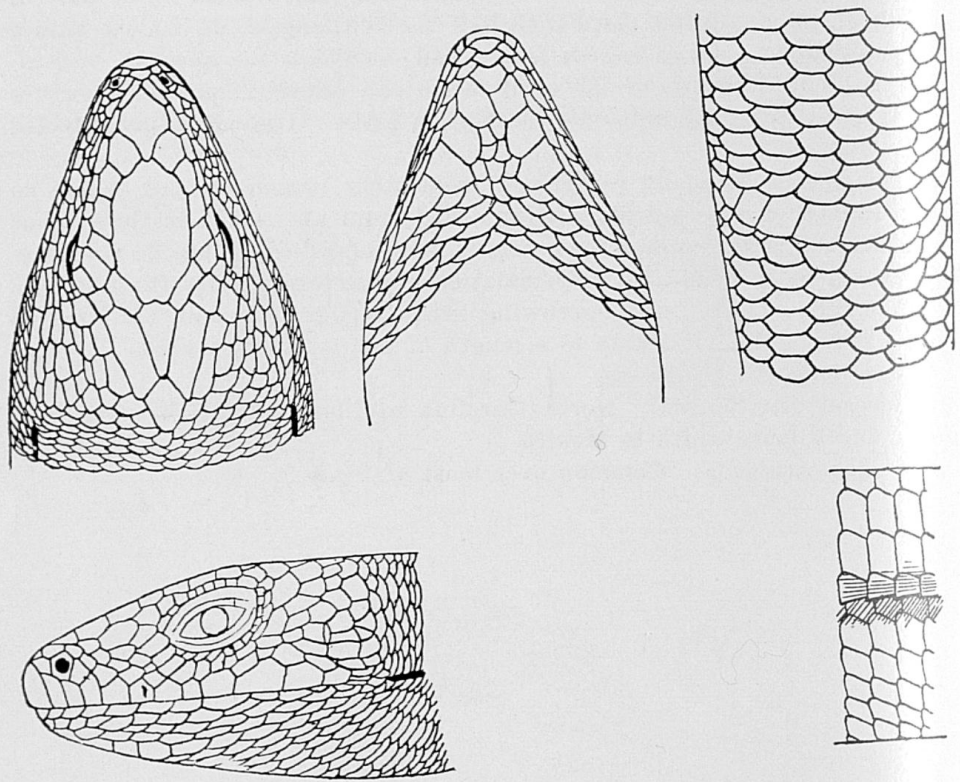


Figure 53. *Ophisaurus ventralis* (Linne) Daudin
(After Cope)

The
adults.
the base
tail. Th
from the
This
on insect
Type
Gene
and Ariz
Alab
bile coun

Family: TEIIDAE

Genus: CNEMIDOPHORUS, Wagler

Cnemidophorus sexlineatus (Linne) Dum. and Bibr.

Six-Lined Lizard, Race-Runner

The coloration in this species is practically the same in young as in adults. There are six distinct yellow stripes extending from the head to the base of the tail. Some of the stripes extend almost to the tip of the tail. There is also a central brownish stripe down the midline extending from the head to the base of the tail.

This is decidedly a terrestrial lizard, seldom leaving the ground. It lives on insects, etc., and reaches a size of somewhat over six inches.

Type locality: Carolina.

General distribution: Maryland to Florida, west to northern Mexico and Arizona and up the Mississippi Valley to Lake Michigan.

Alabama records: Tuscaloosa, Greene, Montgomery, Baldwin and Mobile counties. Possibly widely distributed throughout the State.

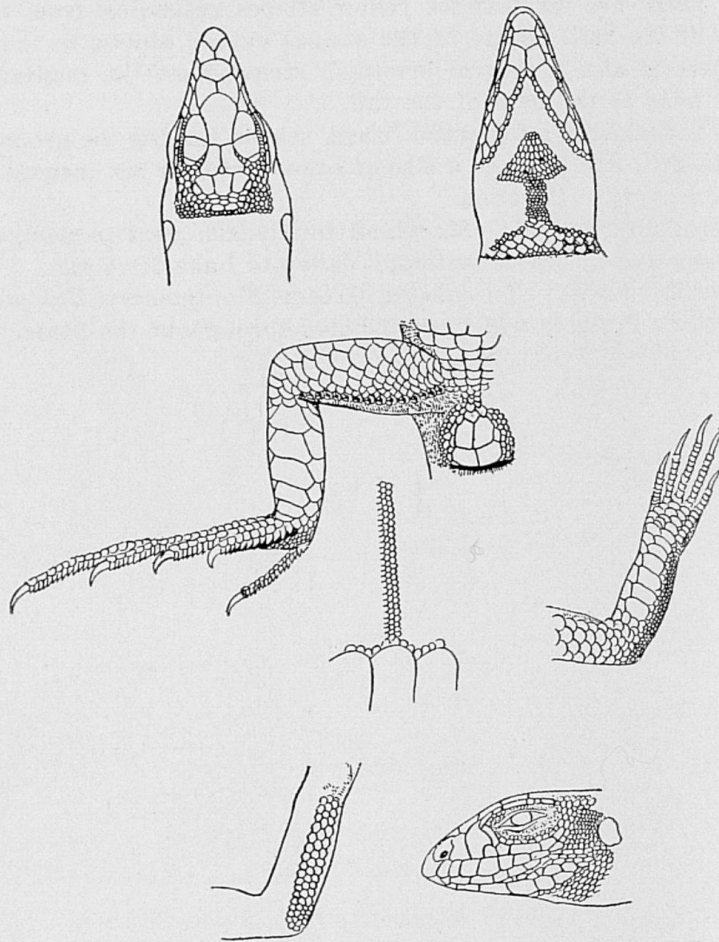


Figure 54. *Cnemidophorus sexlineatus* (Linne) Dum. & Birb.
(After Cope)

Dors:
head and
length of
Habi
beneath f
they squi
leaves or
larvae.
Type
Missouri.
Gene
Alab
haps wid

Family: SCINCIDAE

Genus: LEIOLOPISMA, Zumeril and Bilbron

Leiopisma laterale (Say) Jordan (*Lygosoma laterale*)

Ground Lizard

Dorsal surface is brownish green, often taking a bronze color on the head and anterior part. They are very diminutive, scarcely reaching a length of three and one-half inches.

Habits: This species leads a burrowing life and may often be found beneath fallen trees, dead bark, leaves and other objects. When uncovered they squirm and attempt escape in a laborious way and quickly hide under leaves or other cover. They feed on ants and other small insects and their larvae.

Type locality: Banks of Mississippi River, below Cape Girardeau, Missouri.

General distribution: Maryland to Florida, west to Illinois and Texas.

Alabama records: Mobile, Baldwin and Etowah counties but is perhaps widely distributed over State.

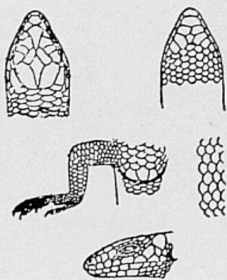


Figure 55. *Leiopisma laterale* (Say) Jordan
(After Cope)

Genus: PLESTIODON, Dumeril and Bibron

Plestiodon fasciatus (Linne) Baird*Eumeces quinquelineatus* Bocourt

Scorpion, Blue-Tailed Skink, Five-lined Lizard, Red-Headed Lizard

This species differs a great deal in young and adult species. In the young there are three white or greenish white stripes extending practically the entire length, one in the center and one on each side. The middle line divides into two lines on the head. These stripes are on a dark brown to olive background. The tail is bright blue. In the adult the head becomes widened and bright red. The remainder of the body becomes a dull olive brown and the stripes disappear. An old specimen may become nearly a foot long.

Oviparous.

Type locality: Carolina.

General distribution: Southern New England to Florida, up the Mississippi Valley to Canada, westward to Arizona.

Alabama records: Calhoun, Tuscaloosa, Bibb, Greene, Sumter, Montgomery, Choctaw, Mobile and Baldwin counties. Over State.

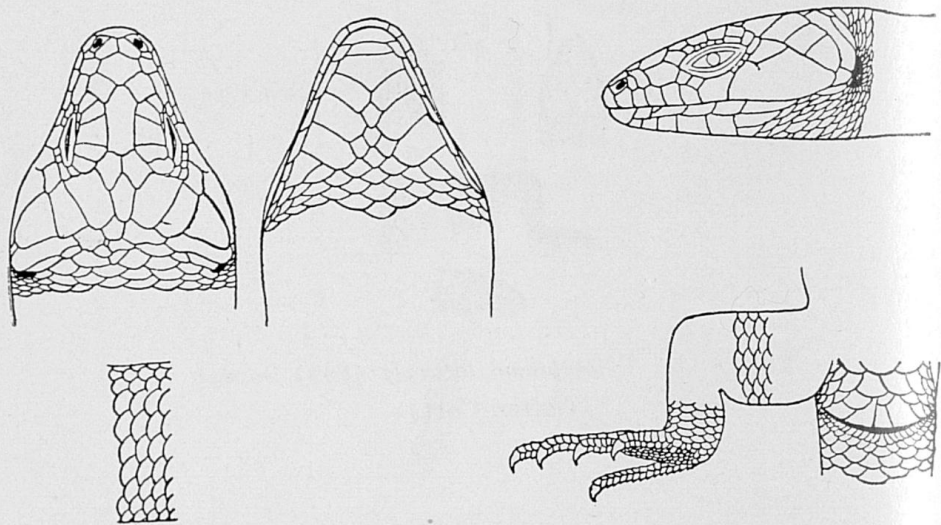


Figure 56. *Plestiodon fasciatus* (Linne) Baird
(After Cope)

This
preocular
which the
six rows
lap, the f
Color abo
lateral ba
scales wi
scales. T
line with
upper lat
extend to
black bor
Type
Gene
Alab
U. S. A.,

Plestiodon pluvialis, Cope
Eumeces pluvialis, Cope

This species has four supraorbital plates and no postnasal. The two preoculars are wedged between the fourth and fifth superior labials, of which the fifth is elongate and beneath the orbit. The scales are in twenty-six rows and the limbs well developed; when laid along the side they overlap, the fore claws reaching the end of the second toe. Mental undivided. Color above, blackish olive; below, malachite green. Two narrow green lateral bands separated from each other by a black band two and a half scales wide, the upper ones of opposite sides separated by a width of six scales. There is a faint trace in the typical specimen of a pale vertebral line with a dark border on each side, and there is a black border above the upper lateral line and another below the inferior lateral line. These lines extend to the orbit and ear respectively. The superior labials are green, black bordered; the other head plates brown with black borders. (Cope).

Type locality: Mobile, Alabama.

General distribution: Central Gulf Area.

Alabama records: Only type specimen collected by Dr. Joseph Corson, U. S. A., and deposited in Cope collection.

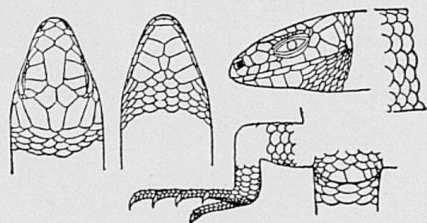


Figure 57. *Plestiodon pluvialis* (Cope)
(After Cope)



CLASS REPTILIA
SUBCLASS ANAPSIDA OR
CHELONIA
ORDER TESTUDINATA

Family: KINOSTERNIDAE

Genus: KINOSTERNON, Spix

Kinosternon carinatum (Gray) Stejneger and Barbour

Aromochelys carinata, Gray; *A. tristycha* Agassiz

Keeled Musk Turtle

Shell evenly sloping on the sides without side keels. Two yellow stripes on side of head, one from snout above the eye to the neck, the other from above the angle of the jaw to the neck. Not keeled in adult.

The head is olive green to brown and covered with black spots. Carapace olive green to brown, with black bands; plastron yellow.

Habits: This species inhabits most of the rivers of our State and is the one most frequently encountered when fishing, being very bad after trot lines and set hooks. It feeds on worms, fish, frogs and organic matter. It is a very adept swimmer and diver. When caught it gives off a very decided odor. It is rather aggressive and fights pugnaciously when cornered or caught.

Type locality: Louisiana.

General distribution: Western Georgia to Louisiana.

Alabama records: Fairly widely distributed over State.

Kinosternon odoratum (Latreille) Gray

Aromochelys or *Sternothoerus odoratus*

Common Mud Turtle, Stink Pot

Plastron keeled only in young, head with yellow stripes. Two yellow stripes on side of head from tip of snout above and beneath the eye to the neck. Carapace not keeled in adult. Shell brownish black above and below in adults, yellow in young. Seams of plastron marked with yellow.

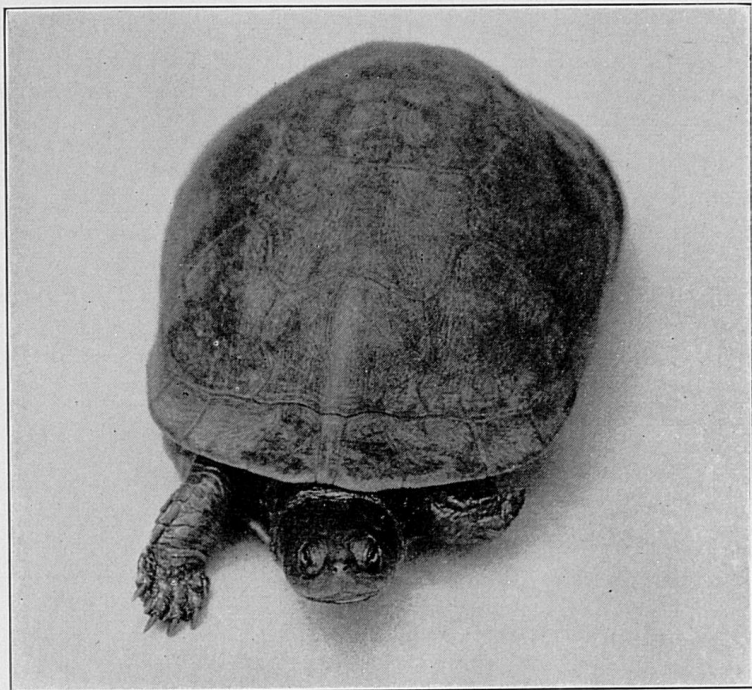
Habits: Similar to Keeled Musk Turtle.

Type locality: Carolina.

General distribution: Eastern and southern United States, west to western Missouri and southern Texas.

Alabama records: Barbour County; Kelly's Pond, Mobile County.

PLATE 33



Kinosternon subrubrum subrubum (Lacepede)
From live specimen in the Museum.

Kinosternon subrubrum subrubrum (Lacepede)
 (*Cinosternum pennsylvanicum*)
 Common Mud Turtle, Stink Pot

Plastron larger, hind portion more movable, each of second pair of plastron plates triangular or nearly so, the inner side of each very short or wanting.

The carapace is olive green to brown with black on margin of the shields. Plastron yellow to yellowish brown. The head is brown with yellow spots. Maximum size about four inches.

Habits: Similar to keeled Musk Turtle.

Type locality: Pennsylvania.

General distribution: Eastern United States exclusive of peninsular Florida, west to Indiana, southeastern Illinois and Tennessee.

Alabama records: Fairly well distributed over State, especially Barbour, Mobile and Baldwin counties.

Kinosternon subrubrum hippocrepis, Gray
 Stejneger and Barbour

Type locality: New Orleans, Louisiana.

General distribution: Southern Alabama to southeastern Missouri and Texas.

Alabama records: Mobile, Alabama.

Plas
 surface
 Keels ve
 to back,
 with syn
 brown b
 species a
 Hab
 They ha
 finger.
 leads a s
 stream.
 a small f
 or insect
 and wou
 thor was
 of a sma
 saw the
 tom. TH
 trap.
 Typ
 Gen
 ern Flor
 Alab

Family: CHELYDRIDAE

Genus: MACROCHELYS, Gray

Macrochelys temminckii (Holbrook) Gray (*M. lacertina*)

Alligator Snapper

Plastron narrow, cross shaped plates of central portion nine. Under surface of tail with small scales, shell with three strong keels at all ages. Keels very high on carapace. Head very broad behind, tapering anteriorly to back, upper jaw extends beyond lower and strongly hooked, head covered with symmetrical plates. The color of this species is a muddy yellowish brown both dorsally and ventrally, the upper surface being darker. This species attains a great size, often weighing 100 pounds or more.

Habits: It feeds upon fish, frogs and is especially fond of snakes. They have very powerful jaws and their bite might prove the loss of a finger. However, they do not attack without being cornered. This species leads a somewhat sedentary life, lying for hours on the bottom of a muddy stream. It has a very novel means of luring fish into its grasp. There is a small fleshy appendage in the lower jaw which it moves much like a worm or insect. With the jaw widely opened a fish would be attracted by this and would be an easy catch for the quick snapping jaws. In 1928, the author was attracted by the movement of some pinkish object on the bottom of a small stream in Arkansas. It was only after second glance that he saw the turtle which was very neatly camouflaged against the muddy bottom. Thus it was made very clear how its victims could be lured into this trap.

Type locality: Mississippi River, and tributaries.

General distribution: Texas east to southeastern Georgia and northern Florida, north in the Mississippi basin to northern Missouri.

Alabama records: Mobile Bay and River.

PLATE 34



Chelydra serpentina (Linne) Schweigger
 From live specimen in the Museum. Weight, 70 pounds.

Plas
 Under s
 Head is
 cluding
 gers, all
 yellowish
 Hab
 streams.
 cies feed
 the inter
 surface
 loss of a
 The
 Typ
 Gen
 Ala

Plas
 suture.
 Zygomat
 scales ar
 Colo
 tral surr
 There is
 Hab
 Typ
 Gen
 west to
 Ala
 State.

Genus: CHELYDRA, Schweigger

Chelydra serpentina (Linne) Schweigger

Common Snapping Turtle

Plastron narrow, cross shaped, the plates of its central portion nine. Under surface of tail with rather large plates, shell without keels in adult. Head is very rough but is covered with a pliable skin. Marginal plates including nuchal twenty-five. Plastron small leaving limbs exposed, five fingers, all with nails, 5 toes, 4 nails. Carapace brown to black. Plastron yellowish.

Habits: This is one of the commonest species found in our rivers and streams. It is particularly fond of muddy ponds and streams. This species feeds on fish, frogs and snakes. Occasionally it catches birds. One of the interesting features of this turtle is that it will not eat except below the surface of the water. It attains a large size and its bite may mean the loss of a hand or foot. It bites much like a snake, that is, by a quick strike.

The females deposit the eggs in the sand.

Type locality: "Warmer Regions."

General distribution: Eastern North America.

Alabama records: Over entire State.

Genus: TERRAPENE, Merrem

Terrapene carolina carolina (Linne) Bell

Cistudo carolina

Common Box Turtle

Plastron in two pieces, movable, joined to the carapace by cartilaginous suture. Claws on hind feet four each, twelve plates. Carapace convex. Zygomatic arch incomplete in this and the var. *triunguis*. The dorsal scales are broad. Upper jaw hooked. Scales on limbs and feet.

Coloration: In the young carapace is yellow to brown and black. Ventral surface reddish brown. Spots of orange on head, neck, limb and tail. There is a single yellow spot on each scutes of carapace.

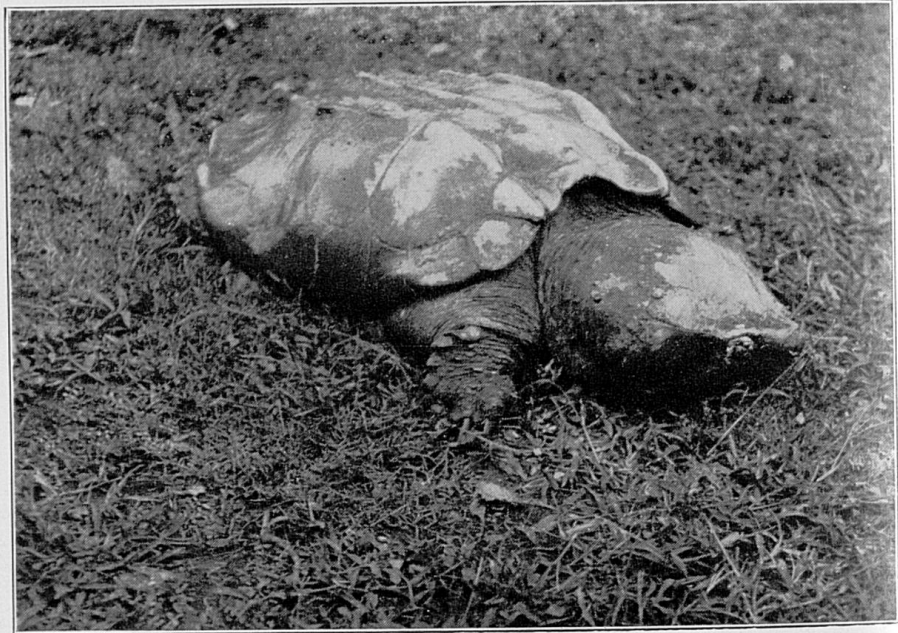
Habits: Similar to *Terrapene major*.

Type locality: Carolina.

General distribution: Eastern United States from Maine to Georgia, west to Tennessee, western Illinois and northward to central Michigan.

Alabama records: St. Clair, Tuscaloosa and Mobile counties. Over State.

PLATE 35



Chelydra serpentina (Linne) Schweigger
 From live specimen in the Museum. Weight 70 pounds.

Terr

Plastr
to the car
three each
shields bro
No web.

Color:
tral surfac
mens the

Habit
sects. It

mer month

Type

Gener

Missouri,

Alaba

This
7 inches.

terior mar

Zygomati

yellow dot

tron yello

Habit

ing throu

During th

depth of t

completely

Frequentl

Type

Gener

eastern T

Alaba

least in s

Terrapene carolina triunguis (Agassiz) Stejneger and Barbour
(*Cistudo triunguis* Agassiz)
Three-Toed Box Turtle

Plastron of two pieces, both movable on a transverse hinge and joined to the carapace at the sides by a cartilaginous suture, claws on hind feet three each. The carapace is convex with obtuse vertebral keel. Dorsal shields broad. Upper jaw hooked and notched. Scales on limbs and feet. No web. Short tail.

Coloration: Carapace in young is yellow to brown and black. Ventral surface generally reddish brown. Orange spots on limbs. In old specimens the carapace is yellow.

Habits: This species feeds on vegetable matter and the larvae of insects. It is found most frequently in valleys near water. In the hot summer months it often buries itself in the mud.

Type locality: New Orleans, Louisiana.

General distribution: Coastal plains of the Gulf of Mexico, north to Missouri, west into Oklahoma and southern Texas.

Alabama records: No official records.

Terrapene major (Agassiz) Baur
Cistudo major Agassiz
Large Box Turtle

This is the largest of the box turtles. It sometimes attains a length of 7 inches. The carapace of this species is very high and flares on the posterior margin. There is a keel down the center. Four claws on hind limb. Zygomatic arch complete. Carapace is dark brown, on which are arranged yellow dots in starlike fashion. There is a yellow band on the keel. Plastron yellow with black markings on shield edges.

Habits: This is a terrestrial form and may often be seen when tramping through the woods or grassy fields. It feeds upon vegetable matter. During the winter months it burrows into the ground, sometimes to a depth of two feet. It is well protected from its enemies in that it can so completely close its shell so that the smallest object cannot penetrate it. Frequently it is sold for human consumption since it makes a fine dish.

Type locality: Mobile, Alabama; Florida.

General distribution: Florida, north into Georgia and west into southeastern Texas.

Alabama records: Mobile County and widely distributed over State, at least in southern part.

Terrapene carolina trivirgata (Agassiz) Stejneger and Barbour
(*Cistudo trivirgata* Agassiz)
Three-Toed Box Turtle

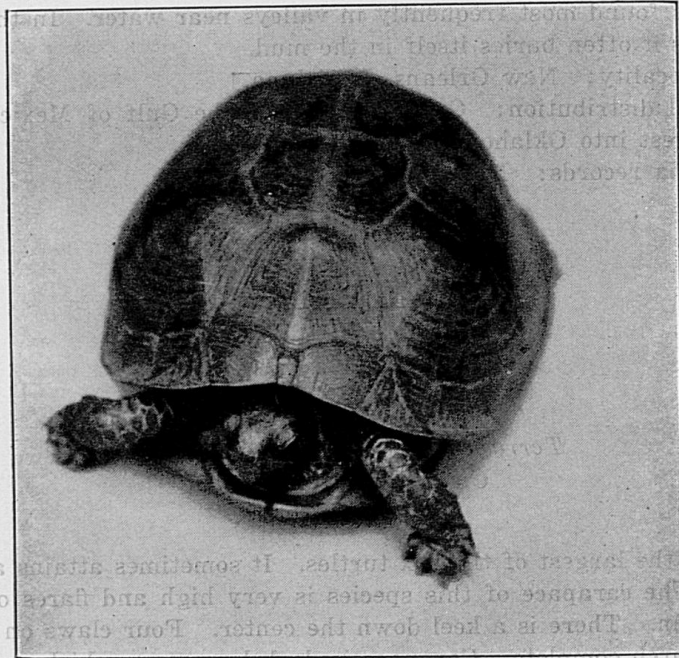
Plastron of two pieces, both movable on a transverse hinge and joined to the carapace at the sides by a cartilaginous suture, claws on hind feet three each. The carapace is convex with obtuse vertebral keel. Dorsal shields broad. Upper jaw hooked and notched. Scales on limbs and feet. No web. Short tail.

Coloration: Carapace in young is yellow to brown and black. Ventral surface generally reddish brown. Orange spots on limbs. In old specimens the carapace is yellow.

PLATE 36

Habits: This species feeds on vegetable matter and the larvae of insects. It is found most frequently in swamps near water. In the hot summer months it often burrows into the ground.

Type locality: New Orleans, Louisiana.
General distribution: Louisiana, Mississippi, Alabama, Georgia, Florida, and west into Alabama.



This is the largest of our turtles. It sometimes attains a length of 7 inches. The carapace of this species is very high and flares on the posterior margin. There is a keel down the center. Four claws on hind limb. Symphysis with complete carapace is dark brown, on which are arranged yellow dots in starlike fashion. There is a yellow band on the keel. Plastron yellow with black spots.

Terrapene major (Agassiz) Baur

From live specimen in the Museum.

Habits: This species inhabits the woods or grassy fields. It feeds upon vegetable matter. During the winter months it burrows into the ground, sometimes to a depth of two feet. It is well protected from its enemies in that it can so completely close its shell so that the smallest object cannot penetrate it. Frequently it is sold for human consumption since it makes a fine dish.

Type locality: Mobile, Alabama; Florida.
General distribution: Florida, north into Georgia and west into southern Texas.

Alabama records: Mobile County and widely distributed over State, at least in southern part.

The
acter of
tric groo
concentri
back"—h
rising wi
the centr
appears
Colo
concentri
lower bo
squares o
in rows a
With
concentri
The
no stripe
profusely
Hab
in fresh
also sma
sought a
Typ
Gen
Florida.
Alab
County.
Typ
Gen
bama.
Ala

Genus: MALACLEMYS, Gray

Malaclemys pileata pileata (Wied), W. P. Hay*Malacoclemmys palustris*

Diamond Back Terrapin

The species differs from all the others of its genus in the rough character of the carapace. Each of the shields contains a number of concentric grooves, rising in step-like fashion. It is owing to the angular, and concentric areas embraced by the shields that the popular name—"diamond-back"—has originated. A well-defined keel is represented by a blunt ridge, rising within each of the central shields; the highest of these ridges is in the central or middle shield of the back. Examined from the side, the keel appears as a series of serrations.

Colouration.—The carapace is grayish or olive, sometimes with darker concentric markings which appeal to the arrangement of the grooves. The lower border of the carapace is olive, each plate embracing hollow black squares or blotches. The plastron is deep yellow, with numerous black dots in rows and dusky bands extending crosswise.

With very young specimens the upper shell is almost white, with black, concentric markings.

The head markings of the adult are strong and constant. There are no stripes. The head, neck and all the exposed, fleshy parts are slaty gray, profusely covered with rounded, black dots. (Ditmars).

Habits: This species frequents salt waters but occasionally is found in fresh water. They feed on vegetable matter such as algae and sea weeds, also small fish, water shells and other organic matter. This species is much sought after for food.

Type locality: New Orleans, Louisiana.

General distribution: Coast from mouth of Mississippi River, east to Florida.

Alabama records: Cedar Point, Coden and Bayou la Batre, Mobile County.

Malaclemys pileata littoralis (W. P. Hay)

Stejneger and Barbour

Diamond Back Terrapin

Type locality: Rockford, Texas.

General distribution: Coast of Texas and outlying islands and Alabama.

Alabama records: Cedar Point and Coden, Mobile County.

Genus: GRAPTEMYS, Agassiz

Graptemys pseudogeographica pseudogeographica (Gray) Holbrook
(*Malacoclemmys lesueuri*)

Map Turtle

The carapace is flaring at the rear and strongly notched at the sutures of the marginal shields. The centre of the carapace rises rather sharply and is surmounted by a high keel, broken into a series of tubercles—one in each shield. This formation produces a strongly serrated outline to the curve of the back. The surface of the carapace is quite smooth, with a dull lustre, although blunt ridges are discernible on the sides.

Colouration.—The carapace is dull olive, or brownish above, with a few coarse and indistinct yellow lines. On each of the shields is one or two large blotches of black or dark brown. These blotches impart a characteristic appearance and greatly assist in separating the species from the Map Terrapin, although the much heavier and tubercular keel is another strong character.

The marginal shields of the underside of the carapace show the dark, concentric blotches like the former species. The plastron is immaculate yellow; occasionally marbled or lined with gray or brown.

Head Markings.—The head is large, with sharply-pointed snout and the colouration is quite distinct. There are but few lines on the top of the head, which is dark olive or black. The lines are vivid yellow. One of these begins at the snout and extends backward for a little distance past the eyes where it abruptly terminates. Behind each eye is a bright yellow mark in the form of a crescent, which connects with parallel lines extending along the head and neck. Behind the crescents are finer markings, which on many specimens, fork in vein-like fashion. The limbs and tail are brightly striped. (Ditmars).

Type locality: Wabash River, New Harmony, Indiana.

General distribution: Mississippi Valley, east to Alabama and Ohio, north to Wisconsin and northern Iowa; west to eastern Kansas and Oklahoma.

Alabama records: None.

The c
are very r
marked ke
row of tub

The c
each shiel

Two yellow
Type

Louisiana
Gener

Alaba

The
geograph
more high

The c
rings whi

Plastron
spot on th

wards fro

Type
Gener

Alaba

Graptemys pseudogeographica kohnii, (Baur)

Stejneger and Barbour

Malacoclemmys kohnii, Baur

Kohn's Terrapin

The carapace of this species flares on the posterior border and there are very marked notches at the sutures of the marginal shields. There is a marked keel on the sloping top of the carapace. This keel is formed by a row of tubercles, one in each shield.

The carapace is olive green to brown, with a blackish brown blotch on each shield. There is a large yellow spot on the head just behind the eye. Two yellow lines extend backward from the eye.

Type locality: Bayou Lafourche, Bayou Teche, and St. Martinsville, Louisiana.

General distribution: Gulf strip from Pensacola to eastern Texas.

Alabama records: None.

Graptemys pseudogeographica oculifera (Baur)

Stejneger and Barbour

The carapace of this species approaches that of *Graptemys pseudogeographica pseudogeographica* except that the tubercles on the back are more highly developed.

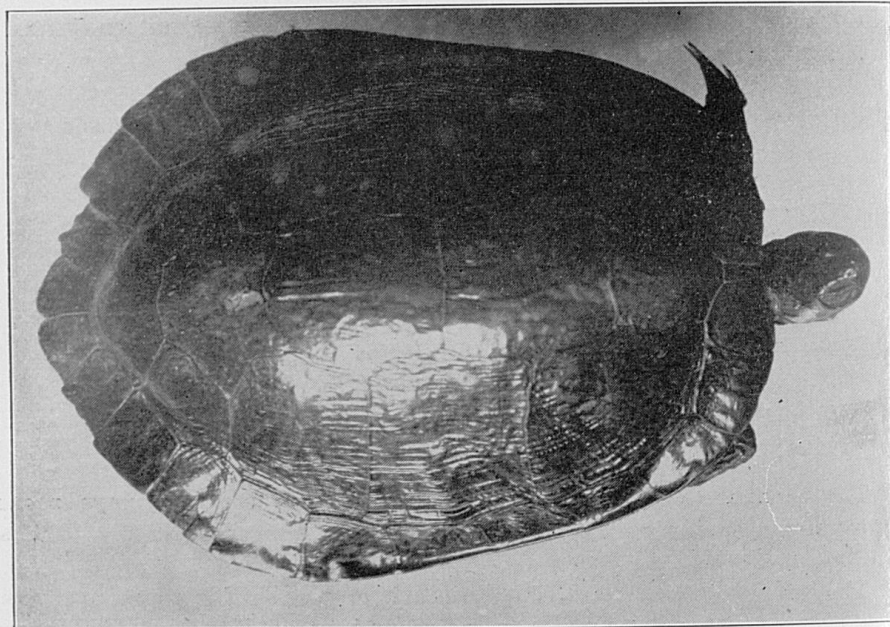
The carapace is olive green. In each of the shields there are yellow rings which are bordered on both inside and outside by dark olive brown. Plastron yellow, the central portion being much darker. There is a yellow spot on the head behind each eye and two yellow stripes extending backwards from the eye. There is also a yellow band on the lower jaw.

Type locality: Mandeville, Louisiana.

General distribution: Western Florida to southern Louisiana.

Alabama records: None.

PLATE 37



Pseudemys mobiliensis, (Holbrook)
From live specimen in the Museum.

This
hind the
light olive
yellow, w
Type
Gener
Ala: a

Upp
side of n
Plastron
with irreg
red line o
throat.
Type
Gener
Alaba

Upp
Small hea
tern of br
with yello
This
Type
Gener
Alaba

Graptemys (Malacoclemmys) pulchra, Baur

This species has a very marked yellow configuration between and behind the eyes, the latter extending some distance back. The carapace is light olive green, the lateral edges being mottled with yellow. Plastron yellow, with dark markings.

Type locality: Alabama River near Montgomery. (T. H. Bean).

General distribution: Not known.

Alabama records: Alabama River near Montgomery.

Genus: PSEUDEMMYS, Gray. Cooters)

Pseudemys alabamensis (Baur)

Chrysemys alabamensis

Alabama Terrapin

Upper jaw with a notch at the symphysis and a cusp or tooth on each side of notch. Lower jaw strongly serrated. Shell is decidedly arched. Plastron yellow with brown markings. Carapace in olive green to brown with irregular red streaks. The head is dark brown. There is a yellowish red line on the neck extending to the eye, also broad red bands on the throat.

Type locality: Mobile Bay, Alabama.

General distribution: Gulf Coast from Florida to Louisiana.

Alabama records: Mobile Bay, Mississippi Sound.

Pseudemys mobiliensis (Holbrook)

Chrysemys mobiliensis

Mobile Terrapin

Upper jaw without either cusp or notch. Plastron yellow, unblotched. Small head, fairly low shell, arched in front. Carapace has variegated pattern of brown and yellow lines forming concentric figures. Head and legs with yellow stripes.

This and *Pseudemys alabamensis* are a valuable source of food supply

Type locality: Mobile, Alabama.

General distribution: Southern portion of the Gulf States.

Alabama records: Mobile Bay.

Pseudemys elegans (Wied) Cope

Chrysemys elegans

Cumberland Terrapin

Shell not keeled except in very young specimens. An oval red spot on neck behind eye. Conspicuous yellow lines on head, neck, limbs and shell.

Notch at symphysis in upper jaw, but no cusp on either side, edges of both jaws not serrated, ridge of masticating surface of both jaws surrounded by dusky concentric lines.

Type locality: New Harmony, Indiana.

General distribution: Southern Texas and Mississippi basin north to Ohio.

Alabama records. Near Anniston.

Pseudemys hieroglyphica (Holbrook) Garman

Hieroglyphic Terrapin

Upper jaw without either cusp or notch. Plastron yellow unblotched. Shell is elongated, flat, and smooth, posterior border notched. Narrow small head, yellow stripes and dots on head. The carapace is olive green to brown and is divided by many yellow lines, between the lines are other concentric yellow lines. The plastron is yellow, with dark blotches on border of marginal shields.

Type locality: Cumberland River, Tennessee.

General distribution: Alabama, Georgia and Tennessee.

Alabama records: Tuscaloosa County, Alabama.

Shell 1
of shell; sh
tern of na
upper or l
shield, also
green to b

Type
Gener
Central FL
Alaba
bile Count

Plastr
Limbs thi
striae on
single und
burrowing

The c
blotches in
ing. The

This
Type
Gener
olina to F
Alaba

Genus: *Dierochelys*, Agassiz
Dierochelys reticularia (Latreille) Gray
Chrysemys reticulatus
Chicken Turtle

Shell keeled. Head and neck, when extended, about two-thirds length of shell; shell long and narrow, finely wrinkled all over, with reticular pattern of narrow yellow lines in large mesh. There are no red markings on upper or lower marginal shields. There is a yellow bar on each marginal shield, also a broad yellow band on forelimb. The dorsal surface is olive green to brown and is marked with yellow lines. Ventral surface yellow.

Type locality: Carolina.

General distribution: Coastal Plain from Beaufort, North Carolina, to Central Florida and Mississippi alluvial plain.

Alabama records: Several specimens taken by H. P. Löding from Mobile County.

Genus: GOPHERUS, Rafinesque
Gopherus polyhemus (Daudin) Stejneger
Testudo polyphemus, Daudin
Gopher, Land Turtle

Plastron in one piece, immovable, joined to carapace by bony bridge. Limbs thick and club shaped, hind limbs smallest, shell with concentric striae on the plates but not keeled, marginal plates twelve, there being a single undivided plate in front and another behind over tail; terrestrial and burrowing in habits.

The dorsal surface in young specimens is dull brown with yellow blotches in the centre of each shield. In the adult these blotches are missing. The plastron is dull uniform yellow.

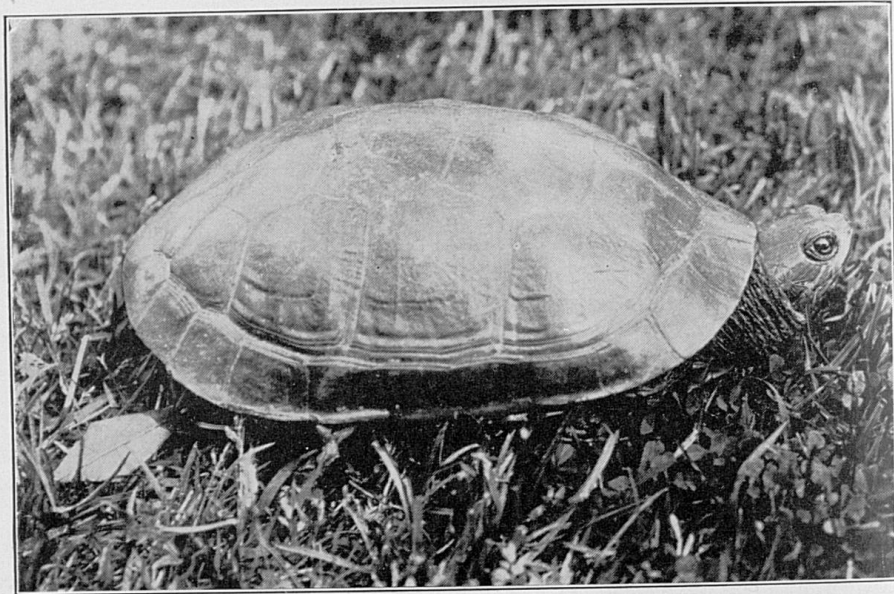
This turtle is an absolute vegetarian and considered very fine food.

Type locality: Savannah and Altamaha rivers, Georgia.

General distribution: Sandy, long leaf pine forest from South Carolina to Florida and Texas, and perhaps north into southern Arkansas.

Alabama records: Southern Alabama, especially near Grand Bay.

PLATE 38



Dierochelys reticularia, Agassiz
From live specimen in the Museum.

Carapa
plate on top
erally one c
The dor
center of ea
tains the we
Type lo
General
far north a
Alabam

Carapa
Nails on fr
shields. U
ed, thus its
Dorsal
ventral sur
border.
These
Habits
Type l
Genera
north as M
Alabar

Family: CHELONIDAE
Genus: CHELONIA, Latreille
Chelonia mydas (Linne) Schweigger
Green Sea-Turtle

Carapace with smooth, not overlapping plates. Scales around large plate on top of head, seven. Costal plates four. Flippers plated. Generally one claw on each front flipper.

The dorsal surface is olive green markings which often radiate from center of each shield. Ventral surface yellow. This species sometimes attains the weight of five hundred pounds.

Type locality: Ascension Islands.

General distribution: Atlantic Ocean; Gulf of Mexico, occasionally as far north as Massachusetts.

Alabama records: Mobile Bay and Mississippi Sound.

Genus: ERETMOCHELYS, Fitzinger
Eretmochelys imbricata (Linne) Agassiz
Chelonia imbricata
Hawk's-Bill Turtle

Carapace with loosely overlapping plates which give it a shingle effect. Nails on front limbs two each. Head limbs and flippers are covered with shields. Upper mandible is much in the shape of Hawk's Bill, that is, hooked, thus its name.

Dorsal surface brown to black with beautiful markings of yellow. The ventral surface is yellow. Shields on head brown to black with yellow border.

These salt water turtles are commonly sold for food.

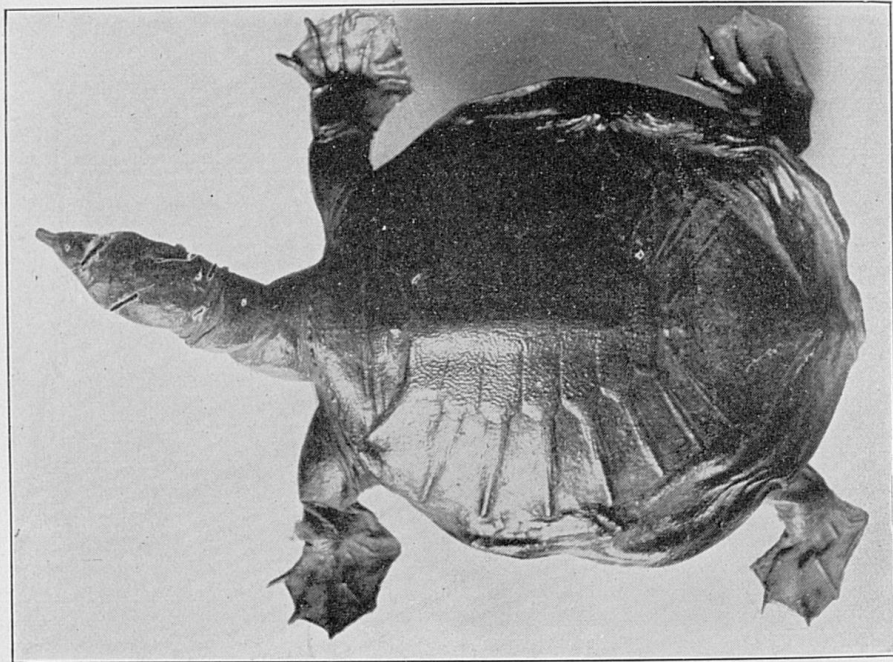
Habits: Similar to other marine species.

Type locality: American Seas.

General distribution: Florida and Gulf Coasts, occasionally as far north as Massachusetts.

Alabama records: None.

PLATE 39



Amyda ferox (Schneider) Oken
 From live specimen in the Museum.

Crushi
 generally f
 costal plat
 nails on th
 The d
 dull yellow
 species nev
 Type l
 Gener:
 to Cape H
 Alaba

Amy

Shell
 ing a sho
 brown. P
 Type
 Gener
 Alaba
 loosa Cou

Genus: CARETTA

Caretta kempii (Garman) Siebenrock
(*Thalasocheilus* or *Lepidochelys kempii*)
Kemp's Loggerhead Turtle, Bastard Turtle

Crushing surface of jaws with ridges, plates on under side of bridge generally four. Scales around large plate on tip of head, thirteen or more, costal plates five on each side. The flippers are plated, generally with two nails on the front pair.

The dorsal surface is uniform brown, while the ventral surface is a dull yellow. It sometimes attains a weight of three hundred pounds. This species never leaves the water except to deposit its eggs in the sand.

Type locality: Gulf of Mexico.

General distribution: Northeastern part of Gulf of Mexico and north to Cape Hatteras, or occasionally to Massachusetts.

Alabama records: Mississippi Sound.

Family: TRIONYCHIDAE

Genus: AMYDA, Oken

Amyda Ferox (Schneider) Oken (*Platypeltis* or *Trionyx ferox*)
Southern Soft-Shell Turtle

Shell with tubercle in front. In adult two pale bands on head forming a short distance in front of eyes. The carapace in adults is a dull brown. Plastron unblotched white. The young are very brightly colored.

Type locality: Savannah River, Georgia.

General distribution: South Carolina to Florida and Louisiana.

Alabama records: Fig Island, Mobile County, Warrior River, Tuscaloosa County.

Amyda spinifera (LeSueur) Hurter
Spiny Soft-Shelled Turtle

Head small, pointed. Proboscis with the nostrils at the tip. These are crescentic in shape, a papilla projecting into each from the septum. The horny covering of the jaws concealed at the sides by the fleshy lips. Carapace with a low obtuse keel along the middle. A series of spines on the front edge of the carapace, largest in the females. Whole upper surface of shell often covered with small asperities, which are often arranged on the posterior part in longitudinal rows. Legs strong, anterior pair with several transverse scales above, posterior with a single large scale. Feet with marginal and interdigital webs. Digits 5-5. The first three on each foot with claws, the remaining two on each foot without claws and concealed by the web. Tail of male projecting considerably beyond the carapace. Callosities of plastron well developed on the middle and hinder part.

Color.—Carapace olive brown, blotched irregularly with darker brown in older specimens. In others the whole top of the carapace is marked with round, pale margined spots, those nearest the middle the largest. The margin at the sides and behind yellowish, bounded with a black line. A pale stripe, edged with black, extends from the top of the snout to the eye and behind the latter continues backward and downward to the side of the neck. A similar stripe extends backwards from each angle of the mouth. Superior surface of the neck with small blackish spots. Inferior surface of the same spotted and reticulated with black. Legs above and feet below, as also the tail, marked with black spots and streaks. Young examples sometimes show a line of blackish specks on the underside of the plastron, extending from the anterior legs to the outside of the posterior pair.

Size.—Length of carapace 350 mm.; width of same 280 mm. Length of plastron 254 mm. (Hurter).

Habits: This species feeds on fish and frogs and is especially fond of mollusca. They are often seen lying on low logs in the water, and appear as snakes, their necks being very long. They deposit their eggs, which are oval, in the warm sand. The soft shelled turtles are fine food.

Type locality: Wabash River, New Harmony, Indiana.

General distribution: In rivers, Vermont and Pennsylvania to Montana and Colorado.

Alabama records: Tombigbee River near Demopolis.

Species
genus are li
ilies and ge
names of sp

Abastor
"Adder, spr
Agkistrodon
Aller, Dr. ?
"Alabama
"Alligator"
"Alligator-s
"American
Amyda
Ancistrodon
Anguidae
Anolis

Baldwin C
89, 91,
118, 12
"Banded r
"Banded w
Barbour C
"Bastard t
Bean, T. F
Bibb Count
"Black kin
"Black rac
"Black sna
Blanchard,

"Blowing
"Blue-taile
"Box-turtle
Brimley, C
"Brown sr

Calhoun C
"Cane-bral

INDEX

Species are not indexed separately, for all those belonging to a given genus are listed on consecutive pages of the text. Technical names of families and genera (accepted names) are printed in italics, and common names of specimens enclosed in quotations.

- A
- Abastor*7, 16, 17
 "Adder, spreading".....22, 24, 25
Agkistrodon.....6, 11, 92-95
 Aller, Dr. T. S. van.....106
 "Alabama terrapin"135
 "Alligator"107, 108
 "Alligator lizard"112
 "Alligator-snapper"125
 "American chameleon"110
Amyda140-142
Ancistrodon92-95
Anguidae113
Anolis110
- B
- Baldwin County—17, 25, 43, 47, 71,
 89, 91, 100, 111, 112, 115, 117,
 118, 124.
 "Banded rattlesnake"101
 "Banded watersnake" 68
 Barbour County.....111, 122, 124
 "Bastard turtle"141
 Bean, T. H.....135
 Bibb County97, 103, 118
 "Black kingsnake" 56
 "Black racer" 30
 "Black snakes"30, 36, 41
 Blanchard, Dr. Frank N.,
 vi, 52, 55, 56
 "Blowing adder"22, 25
 "Blue-tailed skink"118
 "Box-turtles"127-129
 Brimley, C. S..... vi
 "Brown snake" 74
- C
- Calhoun County118-136
 "Cane-brake rattler"101
- Caretta*141
Carphophis7, 14, 15
Cemophora8, 58, 59
 "Chain snake" 51
Chelonia139
Cheloniidae139
Chelydra126, 128
Chelydridae139
 "Chevron rattler"101
 "Chicken snake" 34
 "Chicken turtle"137
 Choctaw County118
 Clarke County107
 "Clark's water-snake" 60
Cnemidophorus115, 116
 "Coachwhip" 32
 "Cobra" 24
Coluber—7, 20, 26, 30-37, 42, 44, 58,
 76, 81, 90, 95.
Colubridae 14
 "Common swift"112
 "Cope, E. D.....vi, 47, 49, 119
 "Copperhead" 92
 "Coral snake" 90
 "Corn snake" 34
 Corson, Dr. Jos.....119
 "Cotton-mouth moccasin" 95
Crocodylus106
Crotalidae 92
Crotalus4, 73, 95, 96, 98, 103
 "Crowned tantilla" 89
 "Cumberland terrapin"136
- D
- "DeKay's snake" 74
Diadophis7, 20, 21
 "Diamond-back rattler" 99
 "Diamond-back terrapin"131
 "Diamond-back watersnake"..... 64
Dierochelys 137, 138

INDEX—Continued

- Ditmars, R. L.....vi, 41, 62, 63, 73,
131.
Drymarchon8, 42, 43
- E
- Elaphe*5, 34-41
Elapidae 90
Eretmochelys139
Etowah County.....91, 117
- F
- Farancia*7, 18, 19
"Fence lizard"112
"Five-lined lizard"118
"Florida swift"111
- G
- "Garter-snake"83, 84, 86
"Glass-snake"113
"Gopher," *Gopherus*137
"Gopher-snake" 42
Graptemys132, 133, 135
"Grass-snake" 74
"Gray rat-snake" 38
"Green sea-turtle"139
"Green snake, rough"..... 28
"Green snake, smooth"..... 26
Green County91, 112, 115, 118
"Ground-lizard"117
"Ground-rattler" 98
"Ground-snake"14, 81
- H
- Hale County103
"Hawk's-bill turtle"139
Heterodon.....5, 9, 22, 23, 25
"Hieroglyphic terrapin"136
"Hog-nosed snake"22, 25
"Hoop-snake," "Horn-snake" 18
Hurter, Julius, Sr.....69, 142
- I
- Iguanidae*110
"Indigo snake" 42
- J
- "Joint snake"113
- K
- "Keeled musk-turtle"123
"Kemp's loggerhead turtle".....141
"King-snakes"51, 53, 57
"King-snake, black" 56
Kinosternidae, *Kinosternon* 122, 124
"Kohn's terrapin"133
- L
- Lampropeltis*vi, 8, 9, 40, 50-57
"Land turtle"137
Leimadophis7, 48, 49
Leiodopisma117
Liopeltis7, 26, 27
Löding, H. P.....vi, 47, 73, 137
- M
- Macrochelys*125
Malacoclemmys131
"Map-turtle"132
Marengo County142
Micrurus7, 50, 59, 90, 91
"Milk snake" 58
Mobile County—17, 25, 43, 49, 55,
57, 66, 73, 78, 85, 89, 91, 100,
103, 106, 111, 112, 115, 117, 118,
119, 122, 125, 127, 129, 131, 137,
139, 141.
"Mobile terrapin"135
"Moccasin" 68
Monroe County103, 107
Montgomery County—66, 112, 115,
118, 135.
"Moon-snake" 67
"Mud-snake" 18
- N
- Natrix*.....5, 10, 60-73, 85, 95
- O
- Ophiodryx*5, 28, 29
Ophisaurus113, 114

"Pilot black
"Pine snake
Pituophis
Plestiodon
Pseudemys
"Puff-adder

"Queen-sna

"Race-run
"Rainbow s
"Red-bellie
"Red-bellie
"Redheaded
Roby, Will

Saint Clair
"Salt and
"Salt-water
"Say's kin
"Scarlet s
Sceloporus
Scincidae
"Scorpion"
"Sistrurus"
"Six-lined
Smith, H.
"Snakes"
"Snapping
"Southern
"Spiny sof
"Spiny sw
"Spotted c

INDEX—Continued

P

"Pilot black-snake"36, 41

"Pine snake" 44

Pituophis6, 44-47

Plestiodon118, 119

Pseudemys134, 136

"Puff-adder"22, 25

Q

"Queen-snake" 67

R

"Race-runner"115

"Rainbow snake"16, 83, 84

"Red-bellied snake" 76

"Red-bellied water-snake" 70

"Redheaded lizard"118

Roby, William 63

S

Saint Claire County127

"Salt and pepper snake"..... 53

"Salt-water moccasin" 60

"Say's king snake" 53

"Scarlet snake"34, 58

Sceloporus110

Scincidae117

"Scorpion"118

"*Sistrurus*"4, 96-98

"Six-lined lizard"115

Smith, H. H..... 97

"Snakes"13-103

"Snapping turtle"127

"Southern soft shelled turtle".....141

"Spiny soft shelled turtle".....142

"Spiny swift"111

"Spotted chicken-snake" 38

"Spreading adder"22, 24, 25

"Stinger" 19

Storeria5, 12, 74-77

"Storer's snake" 76

"Striped water-snake" 66

Sumter County118

T

Talladega County 85

Tantilla7, 89

Teiidae115

Terrapene127, 129, 130

Thamnophis6, 11, 83-88

"Three-toed box turtle"129

"Thunder-snake" 18

"Timber rattler"101

Trionychidae141

"Turtles"122-142

Tuscaloosa County—17, 25, 47, 55,
63, 67, 71, 80, 85, 89, 91, 103,
112, 115, 118, 127, 136, 141.

V

Van Aller, (see Aller, Dr. T. S. van)

"Velvet tail rattler".....101

"Virginia (genus)7, 12, 78, 80

"Virginia's snake"78, 79

W

Walker County 67

"Water moccasin" 95

"Water-pilot" 72

"Whip-snake" 32

"Worm snake"14, 81

Z

Zamenis30, 32

Geol
v

ALA
