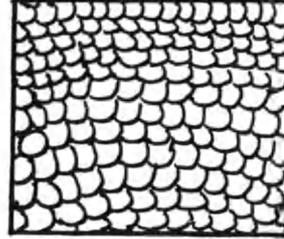
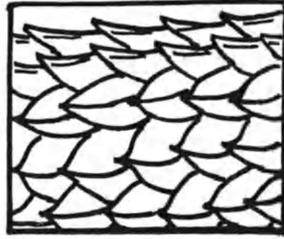
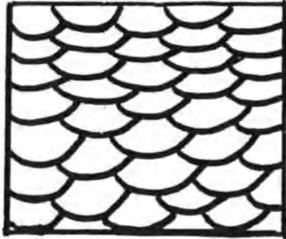


LIZARDS OF VIRGINIA

"A"

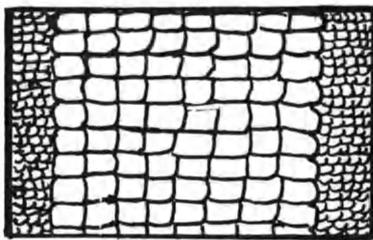
SCALE TYPES:



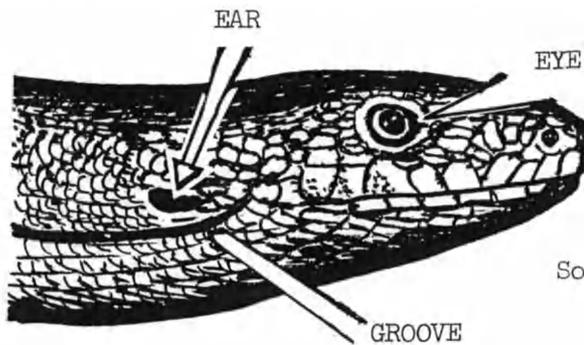
SMOOTH (L)

SPINY (C)

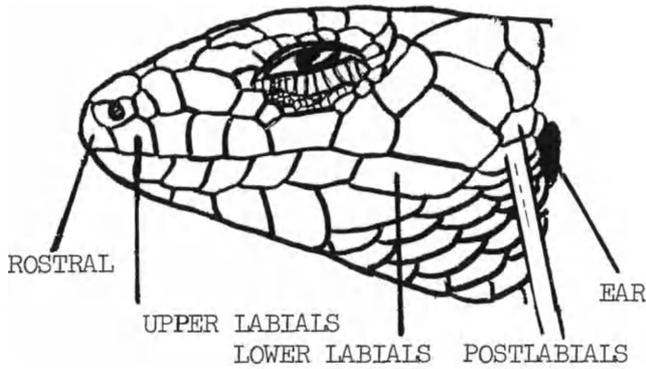
GRANULAR (R)



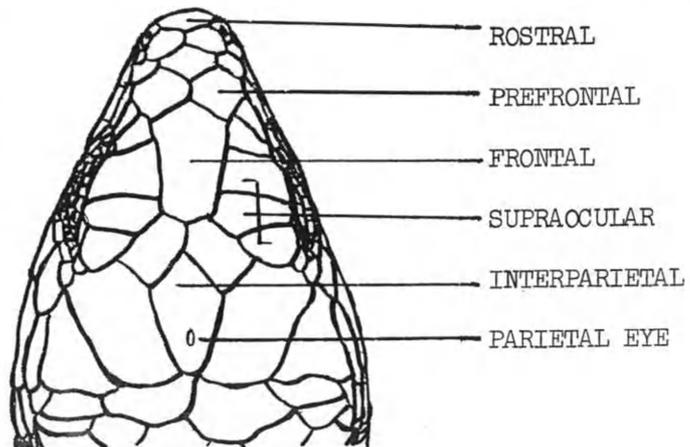
RECTANGULAR
VENTRAL SCALES



Source: VIRGINIA WILDLIFE
AUGUST 1962



HEAD PLATES OF THE
SKINKS (Eumeces)



SOURCE: E.H. TAYLOR'S
"THE GENUS EUMECES"

DESCRIPTION OF THE
LIZARDS OF VIRGINIA

Identification of the lizards depends, primarily, upon the scales on the side and top of the head, and beneath the tail, as well as the color.

It will be necessary to have, or to gain, some familiarity with the large scales or plates on the head and the belly, as well as the overall appearance of the collected specimens. The

following pages include a specially-prepared "key to the lizards of Virginia" and diagrams recommended for use with that "key" by its author.

It is hoped that the total assembled VHS special bulletin (VHS-B Nos. 67 and 68) will assist you in making an accurate identification in the field. Locality records are badly needed.

STANDARD COMMON NAMES

- (1.) Green Anole
- (2.) Six-lined Racerunner
- (3.) Northern Coal Skink
- (4.) Five-lined Skink
- (5.) Southeastern Five-lined Skink
- (6.) Broad-headed Skink
- (7.) Ground Skink
- (8.) Eastern Slender Glass Lizard
- (9.) Eastern Glass Lizard
- (10.) Northern Fence Lizard

SCIENTIFIC NAMES FOR VA. LIZARDS

1. Anolis c. carolinensis
2. Cnemidophorus s. sexlineatus
3. Eumeces a. anthracinus
4. Eumeces fasciatus
5. Eumeces inexpectatus
6. Eumeces laticeps
7. Lygosoma laterale
8. Ophisaurus attenuatus longicaudus
9. Ophisaurus ventralis
10. Sceloporus undulatus hyacinthinus

KEY TO THE LIZARDS OF VIRGINIA

N. D. Richmond, VHS
Carnegie Museum,
Pittsburgh, Pa.

- A. With four legs, (Note: Salamanders resemble lizards but lack scales and claws.) see "C"
- Legless, resembles a snake except for presence of movable eyelids, ear openings, and a groove along each side of body. "B"
- B. White markings on posterior corners of the scales, never in middle of a scale; no mid-dorsal stripe. (8) Ophisaurus ventralis
Eastern Glass Lizard
- White markings in middle of scales, often forming a stripe; a distinct mid-dorsal stripe. (9) O. a. longicaudus
Slender Glass Lizard
- C. Scales smooth and glossy see "F"
- Scales keeled, spiny, or granular. see "D"
- D. Scales keeled ending in a small spine; color brown with darker wavy cross-bands. (10) S. c. hyacinthinus
Northern Fence Lizard
- Scales granular; pattern either of yellow longitudinal stripes or absent; no cross bands. . "E"
- E. Pattern of six yellow lines, ventral scales rectangular plates, quite different from granular dorsal scales (2) C. sexlineatus
Six-lined Racerunner
- Body usually uniform green, may be brown or yellow; no lines; ventral scales granular like dorsals. . . (1) Anolis carolinensis
Green Anole
- F. Five yellow lines on body including one in middle of back that divides to form 2 lines on top of head. Small specimens have bright blue tails. see "H"
- Four white lines on body, or none. Never a line in middle of back or on head, tail not blue. Middle of back uniform brown or tan, sides darker. . . see "G"

KEY TO VIRGINIA LIZARDS cont'd

- G. Black to dark brown band on each side bordered with a white line above and below, middle of back gray or olive brown. No transparent disc in lower eyelid. (3) Eumeces anthracinus
Northern Coal Skink

Black or dark brown bands on sides not bordered with white lines, middle of back light golden tan. A distinct transparent disc in lower eyelid. (7) Lygosoma laterale
Ground Skink

H. Genus Eumeces, Blue tailed skinks: Three species in Virginia.

These are difficult for the beginner to identify. The most common is (4) the Five-lined Skink (E. fasciatus). If the body is longer than 3" it is (6) the Broad-headed Skink (E. laticeps). The other species in Va. is (5) the S.E. Five-lined Skink. The young of all three of these are black, with bright yellow lines and a brilliant blue tail. "J"

- J. Middle row of subcaudal scales strongly widened, wider than other subcaudal scales. K
Middle row of subcaudal scales not conspicuously wider than the other subcaudals (5) E. inexpectatus
Southeastern Five-lined Skink
- K. Fifth upper labial in contact with eye. (4) E. fasciatus
Five-lined Skink
- Fifth upper labial does not contact eye. (6) E. laticeps
(but sixth upper labial does).
Broad-headed Skink

See black and white diagrams:

LIZARDS OF VIRGINIA:

Description

Data

Green, brownish-green to gray; color changes.

Pattern: none, uniform or mottled with irregular dark streaks or spots.

Belly: tan to white, lighter than back.

Unusual features: head large, distinct from neck; a pink throat fan under chin in males; small or absent in females. Toe pads aid in climbing. Scales small both on back and on belly. Tail is long, round, and slender. (Specimens needed.)

Dull medium to pale gray; sometimes bluish.

Dorsal scales 76 to 93 rows.

Pattern: Six light stripes, white to yellow lengthwise (head-to-tail). Short light stripe on sides of tail extending back from hind leg; stripe is bordered by a dark line.

Belly: eight rows of large plates -- whitish in live specimens; bluish in preserved specimens.

Unusual feature: Long whip-like tail.

Uniform brown to olive brown; dorsal scales are smooth, glossy, and in 26 to 30 rows at mid-body.

Pattern: Five white to orange or gold stripes; dark areas between stripes extend from eyes backward along sides. Females tend to retain the pattern; males lose it with age, darken. In both sexes the dark bands along sides remain.

Unusual feature: reddish-orange cheeks on males.

Notes: Prefers moist areas. Climbs trees, shrubs, vines; more easily collected after dark with gasoline lantern.

Length: Max. 7.5 inches
snout-to-vent 2.7 inches
Ave.(incl. tail) 5 in.

Juveniles: same color as adult.

(1) Green Anole
(Anolis c. carolinensis)

Notes: Prefers sandy or other well-drained loose soils, or rocky outcrops and river flood plains; a ground dweller.

Length: Max. 9.5 inches
snout-to-vent 3 inches
Ave.(incl. tail) 6 in.

Juveniles: 3½ to 4 inches on hatching; same color as adult.

(2) Six-lined Racerunner
(Cnemidophorus sexlineatus)

Notes: Prefers damp, wooded areas; seldom in trees.

Length: Max. 7.5 inches
snout-to-vent 3.0 inches
Ave.(incl. tail) 5 in.

Juveniles: 5 white to yellow stripes on black background. Tail bright blue. Length on hatching 2 to 2½ inches, or a snout-to-vent length of 1 in.

(3) Five-lined Skink
(Eumeces fasciatus)

LIZARDS OF VIRGINIA

Description

Data

Dark brown background; dorsal scale rows 30 to 36.

Pattern: Five light stripes are narrow, otherwise similar to other five-lined skinks in pattern and variation.

Unusual feature: Scales under the tail are all about the same size.

Notes: Prefers drier areas than other "blue-tailed" skinks.

Length: Max. 8.5 inches
snout-to-vent 3.5 inches
Ave.(incl.tail) 5½ in.

Juveniles: Areas between light stripes are black; five thin light stripes become bright red to orange on top of head.

(4) Southeastern Five-lined Skink (Eumeces inexpectatus)

Olive brown; color, pattern, as in five-lined skinks. Dorsal scale rows 30 to 32.

Unusual feature: Orange-red head, swollen cheeks.

Tail: Middle row of scales under tail wider than other subcaudal scales (see diagrams and key).

Notes: A woodland species, it likes hollow trees, logs; is arboreal in habit.

Length: Max. 12.5 inches
snout-to-vent 5.5 inches
Ave.(incl.tail) 6.5 in.

Juveniles: black; 5 yellow stripes, bright blue tail. At hatching 2.5 to 3.5 inches and may show seven stripes.

(5) Broad-headed Skink (Eumeces laticeps)

Olive brown to olive gray above; broad dark lateral stripe -- rich brown, 2 to 4 scales in width -- a narrow white line on each side; dorsal scale rows 25 at mid-body.

Pattern: A four-lined skink -- no light line on top of head.

Unusual features: Light stripes extend onto tail; no dark lines down center of back.

Notes: Humid portions of woody hillsides are favored; springs and rocky areas.

Length: Max. 7 inches
snout-to-vent 2.75 in.
Ave.(incl.tail) 5 in.

Juveniles: four-lined with blue tails; patterned as in adults. At hatching, 2 inches; snout-to-vent length 1 inch.

(6) Northern Coal Skink (Eumeces anthracinus)

LIZARDS OF VIRGINIA

Description

Data

Golden brown to blackish-brown; smooth, small dorsal scales in 26 to 30 rows at mid-body.

Notes: Floor of moist woodlands, seldom climbs; likes water. Found in towns and in gardens.

Pattern: Dark dorso-lateral stripe.

Length: Max. 4.7 inches
snout-to-vent 2 inches
Ave.(incl.tail) 3 in.

Unusual features: A transparent scale or "window" in lower eyelid; head scales large. Makes lateral (snake-like) movements when running. Small limbs, slender, cylindrical body; resembles a salamander.

Juveniles: 1.7 inches at hatching, color same as adult.

Belly: White to yellowish.

(7) Ground Skink
(Lygosoma laterale)

Shiny, greenish above, many dark lines on sides.

Notes: Wet meadows and grasslands, or in pine woods.

Pattern: No distinct mid-dorsal stripe, but dark lines or dashes on upper sides.

Length: Max. 37.5 inches
snout-to-vent 18 inches
Ave.(incl.tail) 11.5 in.

Unusual features: White markings on posterior corners of scales. Vertical white marks on the neck.

Juveniles: Khaki broad, dark lengthwise stripe on each side of back; 4 to 6 inches at hatching.

Belly: Whitish with numerous rows of smooth over-lapping scales.

(8) Eastern Glass Lizard
(Ophisaurus ventralis)

Brown, irregular light, dark-bordered cross bands on back and tail.

Notes: Dry grasslands and open woods; active.

Pattern: Dark mid-dorsal stripe, narrow dark lengthwise stripes below the lateral groove and under tail.

Length: Max. 42 inches
snout-to-vent 11.5 in.
Ave.(incl.tail) 22 in.

Juveniles: Narrow black lengthwise stripes; dark mid-dorsal stripe or series of dashes.

(9) Eastern Slender Glass Lizard
(Ophisaurus attenuatus longicaudus)

LIZARDS OF VIRGINIADescription

Gray-brown to tan above; spiny scales.

Pattern: Wavy dark crossbands on back.

Male: Sides of belly greenish-blue and a broad bluish patch on throat; wavy crossbands on back are indistinct or missing. Female: wavy lines on back remain distinct; bright orange, reddish, or yellow patch at base of tail.

Belly: Whitish with black flecks.

Unusual feature: Dark line on rear thigh; spiny scales.

Data

Notes: Prefers relatively dry sunny areas; arboreal.

Length: Max. 7.25 inches
snout-to-vent 3.25 inches
Ave. (incl. tail) 4 in.

Juveniles: Patterned as in females, but darker; 1 to 2 in. at hatching.

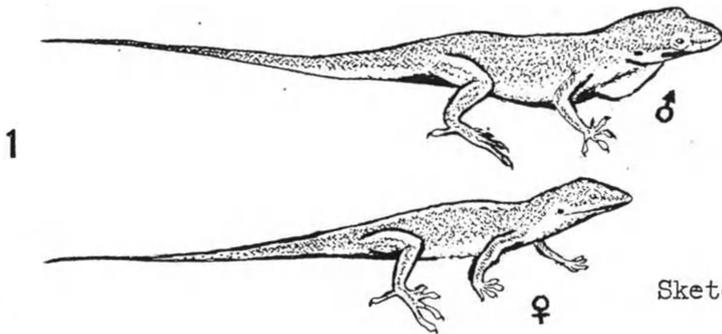
----- (10) Northern Fence Lizard
(Sceloporus undulatus hyacinthinus)

R E F E R E N C E S:

1. BURGER, W. L., "Virginian Glass Lizards" VHS BULLETIN No. 27 (1962)
2. CONANT, Roger, "Field Guide to Reptiles and Amphibians" (1958)
Houghton Mifflin Co. Boston, Mass.
3. DAVIS, Donald M., "A Study of Variation in North American Lizards of the fasciatus group, (Eumeces)" Duke University (1968)
4. HOLMAN, J. Alan "Catalogue of Amer. Amphibians & Reptiles" (1971)
Ophisaurus Herpetological Catalogue Committee
5. McCONKEY, Edwin H. "A Systematic Study of the N. Amer. Lizards of the Genus Ophisaurus" American Midland Naturalist (1954)
6. OLIVER, James A. "The Natural History of N. Amer. Amphibians and Reptiles" Van Nostrand Co. Princeton, N.J. (1955)
7. SMITH, Hobart M. "Handbook of Lizards" (U.S. & Canada)
Comstock Publ. Co. Ithaca, N.Y. (1946)
8. TAYLOR, Edward H. "Genus Eumeces" Kansas University (Lawrence)
Science Bulletin Vol. XXIII (1935)
9. UIBLE, Howard E. "The Amazing Glass 'Snake'" August 1962
"The Northern Fence Lizard" May 1963
VIRGINIA WILDLIFE magazine Richmond, Va. 23219

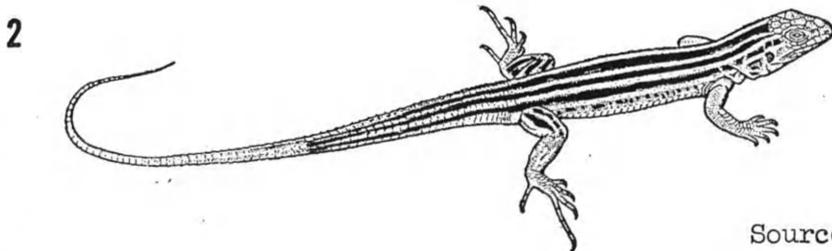
(and locality information from a great number of VHS members and friends.)

"B"



SOURCE: "THE NATURAL HISTORY OF
NORTH AMERICAN AMPHIBIANS AND
REPTILES" By James A. Oliver

Sketch: Lloyd Sanford



Source: Robert C. Stebbins



FROM: "A FIELD GUIDE TO REPTILES
AND AMPHIBIANS" ROGER CONANT



DORSAL
SCALES

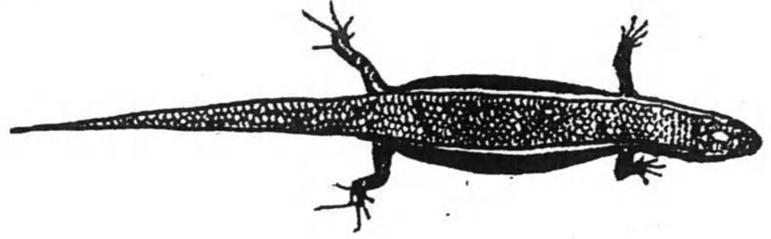
LATERAL FOLD
or "GROOVE"

VENTRAL
SCALES

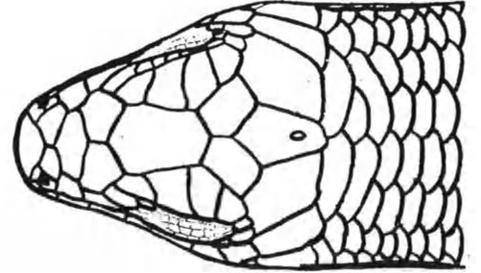
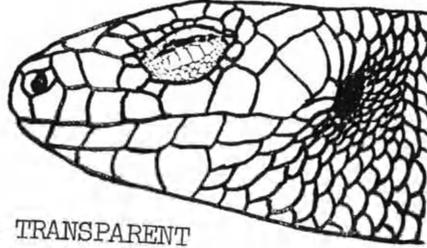


FROM:
HOBART M. SMITH
"HANDBOOK OF LIZARDS"

"C"

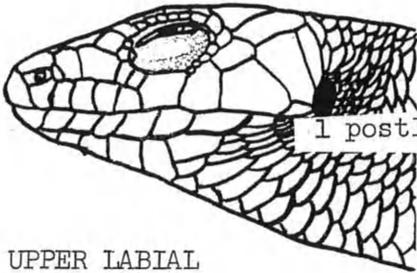


3



NO TRANSPARENT
DISC IN EYELID

FROM: EDWARD H. TAYLOR

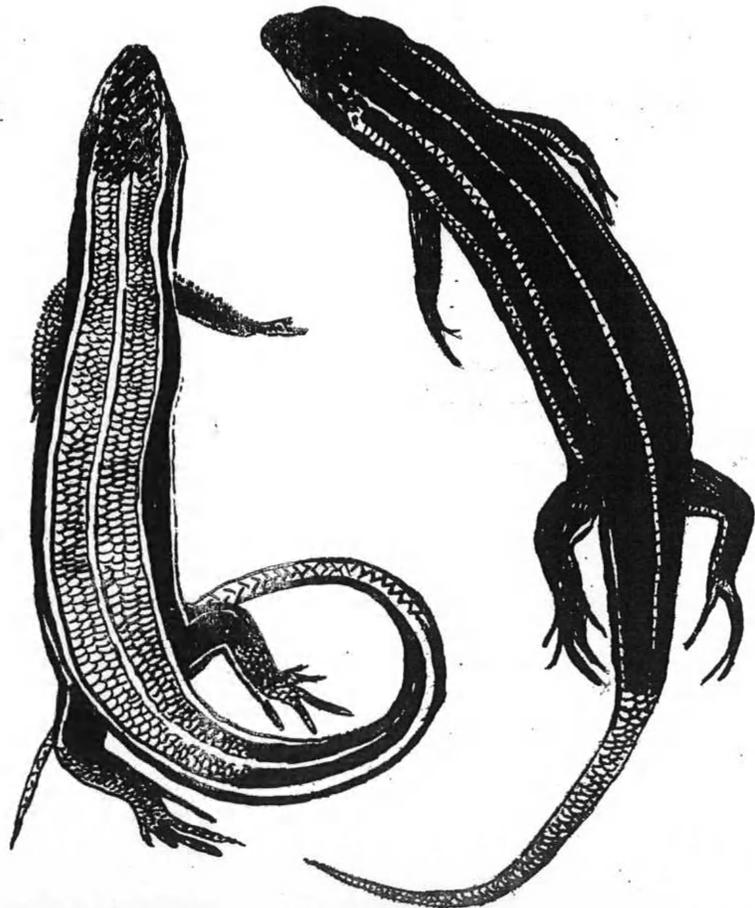
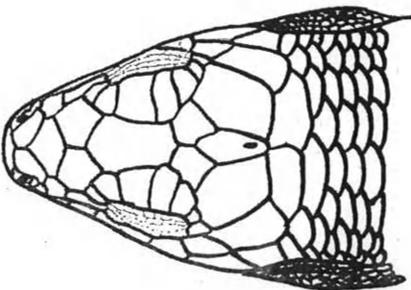


1 postlabial

SIXTH UPPER LABIAL
IN CONTACT WITH EYE

FROM: EDWARD H. TAYLOR

6

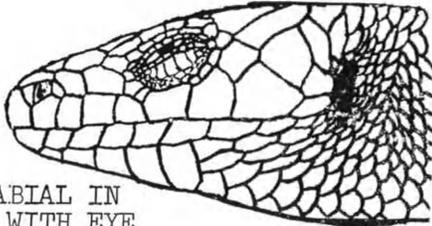


"D"

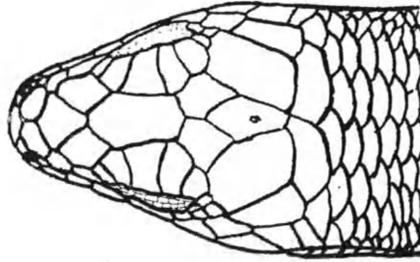


4

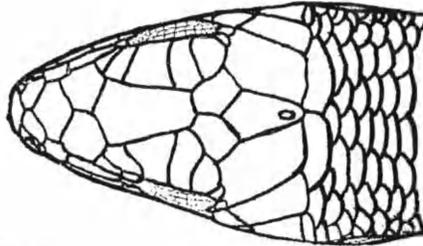
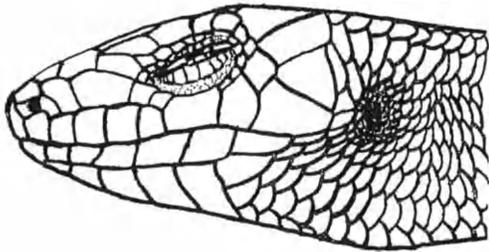
2 postlabials



FIFTH LABIAL IN CONTACT WITH EYE

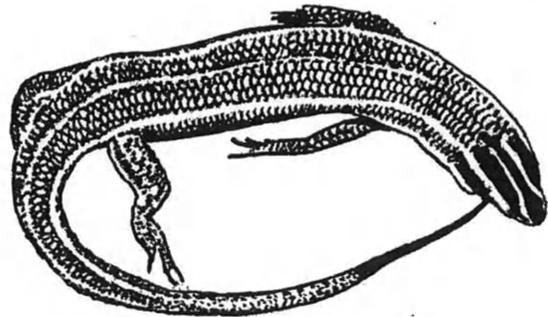


FROM: EDWARD H. TAYLOR

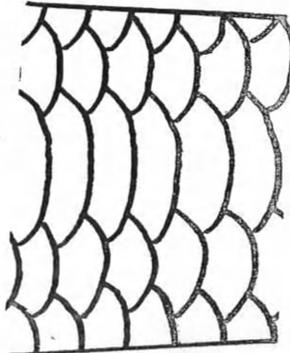


5

FROM: TAYLOR "GENUS EUMECES"



MIDDLE ROW ENLARGED



UNDER-SURFACES OF TAILS

FROM: CONANT



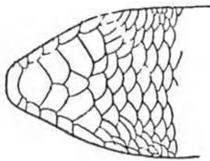
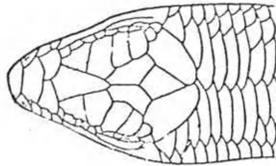
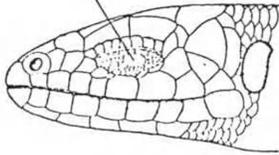
MIDDLE ROW UNIFORM

"E"

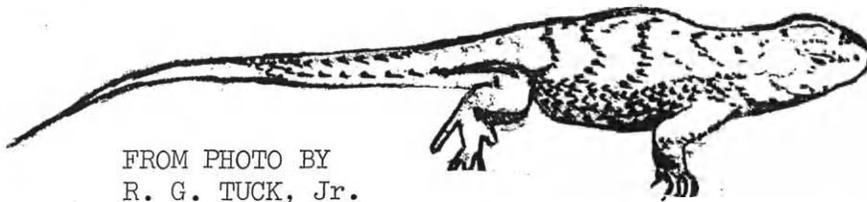


7

TRANSPARENT DISC
IN EYELID

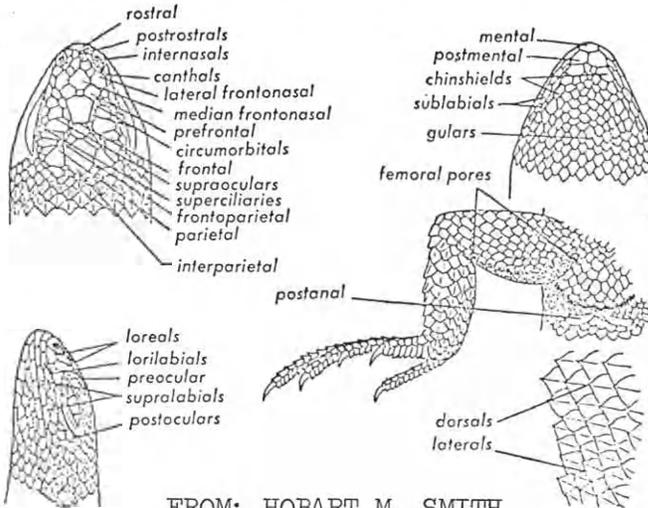


FROM: HOBART M. SMITH
"HANDBOOK OF LIZARDS"



FROM PHOTO BY
R. G. TUCK, Jr.

10



FROM: HOBART M. SMITH
"HANDBOOK OF LIZARDS"

DISTRIBUTION NOTES ON
LIZARDS OF VIRGINIA

There are eight to ten species of lizards native to Virginia. The estimate is based on a survey made by a number of interested people who have provided the VHS editor with data for VHS distribution maps (see VHS-B#61). Additional information has been dredged from textbooks or reference sources entered as "L" for literature record in the county list but carried as a record "o" on the outline maps.

The general view of distribution of lizard species in Virginia is a result of bringing all of the scattered information together. In this, VHS has had the cooperation of college and university professors of vertebrate zoology and the biological or natural sciences, and their students. There are a few records still to come in and we hope these will be on hand in time for revision of the data and compilation with the "Snakes of Virginia" (VHSB#37-38) and "Turtles of Virginia" (VHSB#57-58).

Please check such sources as may be open to you for any additional specimens.

Needed, particularly, are records for counties that presently carry the "?" (does it occur?), or "e" (expected), or "L" (text or literature reference).

Distribution of the Lizards of Virginia is based on a number of preserved specimens in collections at university, college, and high school biology departments, and at institutions such as the U.S. National Museum, the American Museum of Natural History, and the Carnegie Museum at Pittsburgh, among others.

If you know of preserved specimens of lizards from Virginia in collections please drop a note to VHS telling where these are located. Give the name and address of the person in charge, if known.

It is the hope of all who are putting their efforts behind the Va. Herpetological Survey, to improve the knowledge of distribution and natural history of these animals over the next few years.

REMEMBER: Your careful collecting and record-keeping, or photographing in color (2" X 2" slides) if alive, or preserving in alcohol or formalin if dead, will add to the total knowledge of these Virginian species.

One thing the following pages will illustrate better than anything else is the absence of county records for some lizards.

Across Virginia closely-related species occur in the same areas but are separated by elevation or ecological niche.

For example, the "blue-tailed skinks" occur together in most areas of the state but, in reality, are separated in some manner: What is it?

In the Alleghenies and the Blue Ridge, add the northern coal skink to this picture. This small skink seems to prefer dampness, as does the five-lined skink. On the other hand, the broad-headed skink prefers dry habitats. Similarly, the two glass lizards are separated by a preference -- one for a dry grassy area (*O. a. longicaudus*), and the other for a moist area (*O. ventralis*). Much can be done by anyone with sufficient scientific curiosity to check out some of the possible factors that separate these species.

For these reasons, when a specimen is collected, it becomes important to fill out the characteristics of the habitat on the collecting data slip, and it might be well to note such things as elevation, if known.

USE THE VHS COLLECTING DATA SLIPS, REGULARLY.

LIZARDS OF VIRGINIA
DISTRIBUTION NOTES (cont'd)

Green Anole: The Great Dismal Swamp, especially along the Va.-No.Car.line in NANSEMOND County and in Chesapeake (formerly NORFOLK County) Virginia.

In VHS BULLETIN No.67, it was suggested that the green anole may turn up in southeastern Virginia.

No preserved specimen has been found in collections to date. Two "literature records" exist, however.

A PERSONAL COMMUNICATION:

Dr. Roger Conant's "FIELD GUIDE TO THE REPTILES AND AMPHIBIANS"(1958) credits southeastern Virginia with the green anole on the basis of a personal communication from Dr. Richard L. Hoffman, professor of zoology, Radford College, Radford, Va., dated March 29, 1955. Dr. Hoffman wrote to Dr. Roger Conant, as follows:

"... Although there are no preserved specimens to back up the matter, I am convinced that Anolis occurs in the Dismal Swamp, as in 1947-1948 I got two verbal descriptions of a small green lizard with a long sharp head (cover) which occurred on old fences and in low bushes. One sighting was in NANSEMOND County not far from the Virginia line.

"The other was about one mile south of the state line. Since the species has been collected at Edenton, N.Car., about 25 miles south, I see no reason to doubt the sources of information. It would still be nice to have one or two preserved specimens."

A "second" literature record exists. For it, VHS is in debt to Michael J. Clifford, VHS member and County Extension Agent at Amelia Court House, Va. A book by Charles Frederick Stansbury, "THE LAKE OF THE GREAT DISMAL" (New York, 1924), contains mention of "... a tiny chameleon whom I met ... sunning himself on the shore of Lake Drummond."

The reference occurs in the chapter "In Spring" page 32, near the bottom.

"Chameleon" is a name for the green anole which enjoys a greater popular usage. It could have been dismissed as "poetic license" if it were the only reference to reptile life in the book. There is a good chance that the term is correctly used as Stansbury's chapter on "Animal and Plant Life" contains a long list of other reptiles found in the Great Dismal Swamp,

complete with the scientific names then in use. These are very close to those used in "The REPTILE BOOK" (1909) by the late Raymond Lee Ditmars.

Stansbury, it turns out, enjoyed a wide acquaintance among the herpetologists of his day. They included Dr. Leonhard Stejneger of the U.S. National Museum and Ditmars of the N.Y. Zoological Park (Bronx Zoo).

Of this small lizard, Raymond Lee Ditmars said:

"Strictly diurnal, the 'chameleon' appears with the rising of the sun, from where it has been sleeping; the resting place is generally a horizontal twig, well hidden among the leaves. The morning prowl is prompted by a hungry stomach. A large and tempting fly is stalked in the same fashion as a cat does a bird. Slinking forward, with body close to the bough, the lizard nears the victim, then quivers for the rush; there is a dash, with open jaws, and the prey is caught. Before the fly is swallowed, the sharp little teeth are employed to masticate it. The Anolis confines its food entirely to insects."

LIZARDS OF VIRGINIA
DISTRIBUTION NOTES (cont'd)

Six-lined Racerunner: It occurs on the Coastal Plain and the Piedmont. It invades the highland counties by way of the river valleys; following the James and Roanoke rivers into ROANOKE, ALLEGHANY, and BOTETOURT Counties. No specimens have yet been recorded from northern Virginia above STAFFORD County but it occurs in Washington, D.C. and Maryland to the edge of Baltimore. It is apparently not found on the Eastern Shore.

Northern Coal Skink: Blue Ridge and Alleghenies are the collecting areas for this secretive or rare little lizard. It seems to prefer damp hiding places in the highlands. The recent disclosure of a third record has widened the possible range of this species. It has now been recorded from ALBEMARLE, ALLEGHANY, and PATRICK Counties in Virginia, and in Maryland.

Five-lined Skink: Apparently statewide in its distribution. It has been reported from 37 counties (see list) in all types of habitat. No records, yet, from the Eastern Shore counties. It is less common west of the Blue Ridge, except in the major river valleys; the James and the Roanoke.

S.E. Five-lined Skink: It is, primarily, a Coastal Plain form and is rare on the Piedmont. It, too, has not yet been recorded from the Eastern Shore. A recent Duke University PhD thesis by Donald M. Davis (now at University of Guam) has disclosed some unusually northern collecting records for this species in LOUDOUN and PAGE Counties. These and a specimen each from ALLEGHANY and CAMPBELL Counties mean we have four "outriders" from the main population. Since the LOUDOUN County collecting site is a camp, it is possible that the specimen was introduced. But, this cannot be said of the PAGE collecting site. The latter specimen, in the Carnegie Museum collection, (CM 9651), is from 7 miles north of Luray, Va., and was collected in August 1937. It was "...found in a dry, rocky site at the top of a ridge ...altitude approx. 2,500 feet." While originally identified and catalogued as Eumeces fasciatus, it was examined by Donald M. Davis in 1965 and he considered it E. inexpectatus. Neil D. Richmond, Carnegie Museum herpetologist, said of it: "I am inclined to agree with Davis although it makes no zoogeographic sense."

Ed. note: Someone should take a look at the lizard

populations in the region around the South Fork of the Shenandoah River, at both the upper and lower elevations. (Additional details on this specimen are available from VHS.)

Broad-headed Skink: Also apparently statewide, it is more common in the S.E. counties. It has been recorded throughout the Piedmont. It follows the Potomac River basin to Harper's Ferry, W.Va., and the James River to Clifton Forge. It has yet to be recorded from the two Eastern Shore Counties.

On the blue-tailed skinks Dr. Davis commented: "All three species (fasciatus, inexpectatus, and laticeps) apparently attain their largest size in the southern part of their ranges, including a trend toward higher scale counts.

"... fasciatus and laticeps are more closely related to each other than either is to inexpectatus. ... Nothing has been found to suggest that these are not three good biological species."

REPORT UNUSUAL OR RARE lizards to the nearest museum, zoo, university, college, or high school biology department. Provide details on the find to VHS BULLETIN. USE VHS collecting data slips.

LIZARDS OF VIRGINIA
DISTRIBUTION NOTES (cont'd)

Ground Skink: Probably statewide, but not on record from west of the Blue Ridge, except at Clifton Forge (ALLEGHANY County) on the James. It is much more common on the Coastal Plain of Va.

Virginia date from before 1952. There is a great need for more field work in the southeastern counties to establish where it occurs in the state, if at all. Howard Uible, in the VIRGINIA WILDLIFE article, apparently was describing O. ventralis --the more southern, moisture-loving form. However, no records of this form (ventralis) have turned up.

Northern Fence Lizard: It is statewide, less common on the Allegheny Plateau. This is the closest thing in Virginia to the famous "Texas horned toad" since its form, pattern and the rough scales lend themselves to this misidentification. There are few counties for which there are no records. Although it seems to be not common as it once was.

E. Slender Glass Lizard: It has been found on the Coastal Plain and its range extends into adjacent Piedmont counties. It has not been collected north of Ashland (HANOVER County) Va. The species prefers dry grassy areas, and may have quite a wide range in the 'old fields' of the Piedmont beyond present recorded sites.

However, considerable patience and skill are required in collecting glass lizards. They may be observed on highways and, of course, smashed specimens may be preserved, if identifiable, and if they contribute a new locality for the record.

UNUSUAL OR RARE SPECIMENS should be saved, alive if possible, or preserved if dead-on-the-road. Photograph live specimens. A 2" X 2" color slide will be accepted as a record--if species can be determined. Place a familiar object in foreground for size comparison. WRITE to VHS BULLETIN about it.

Eastern Glass Lizard: Not yet recorded but, if this species is found in Va., it will be from along the Virginia state line in the southeast. It prefers moist grassy areas. (See "The Amazing Glass Snake" VIRGINIA WILDLIFE, August 1962, Vol. XXIII, No. 8).

For the early riser, as Burger noted in 1962, the glass lizard may be flushed out from hiding places along the weedy margins of fields by gently prodding a wide swath of vegetation with a long switch. The collector will have an opportunity for one quick diving grab. This may help to explain the lack of Ophisaurus records on the Piedmont or in the Coastal Plain counties.

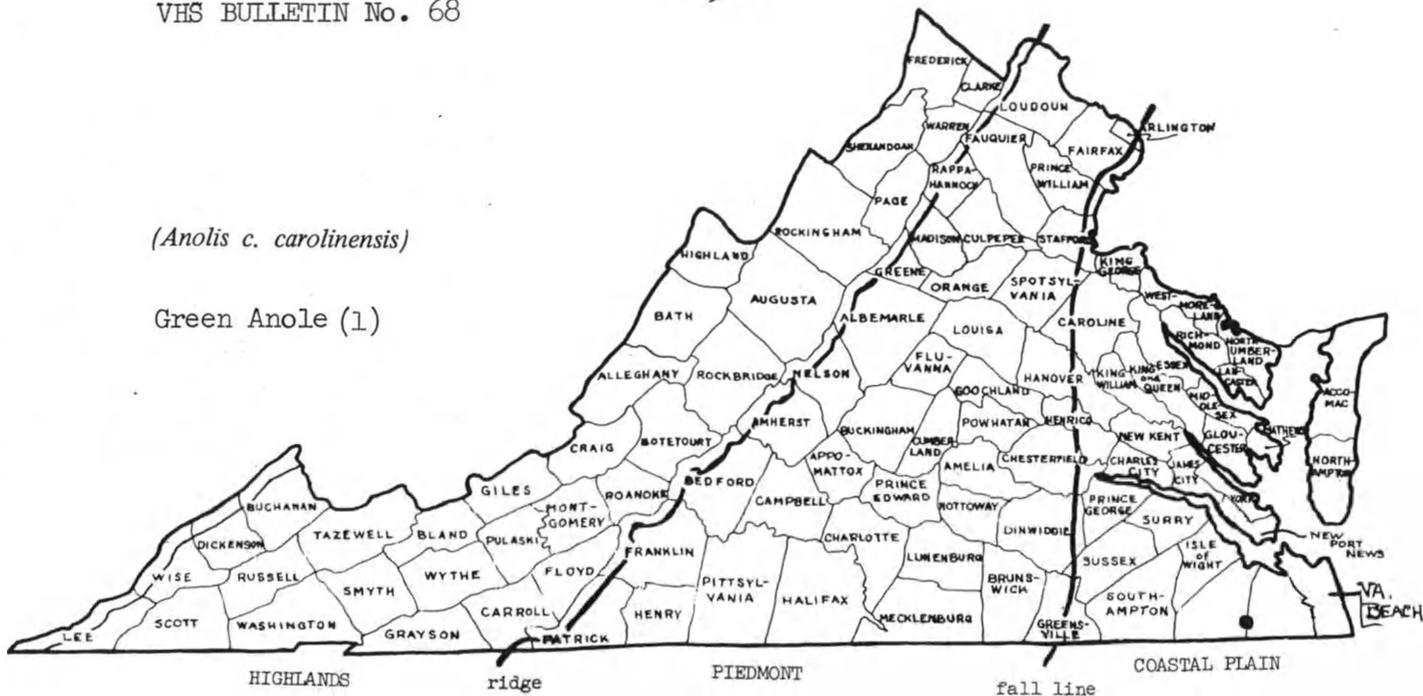
The small circles "o" on the following maps are collecting sites backed--by preserved specimens in one of the scientific depositories in Virginia or in an adjacent state.

Before 1952, specimens of the glass lizard were attributed to Ophisaurus ventralis. Edwin McConkey distinguished two species in the northeastern part of the Ophisaurus range. Early records of O. ventralis in southeastern

Additional records are desired; even badly needed. IF YOU KNOW OF ANY PRESERVED SPECIMENS NOT NOW RECORDED, PLEASE LET VHS KNOW ABOUT THEM. ACCURATE DATA WILL BE MOST WELCOME.

(Anolis c. carolinensis)

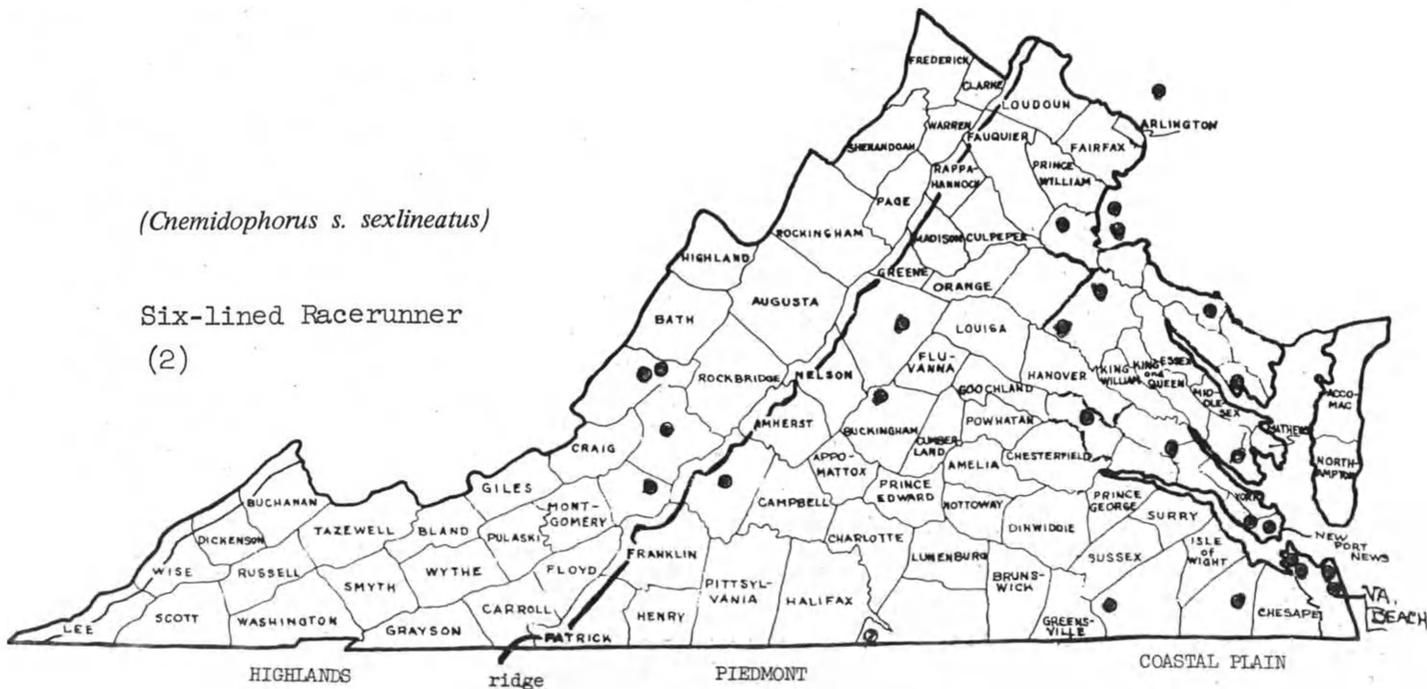
Green Anole (1)



(Chemidophorus s. sexlineatus)

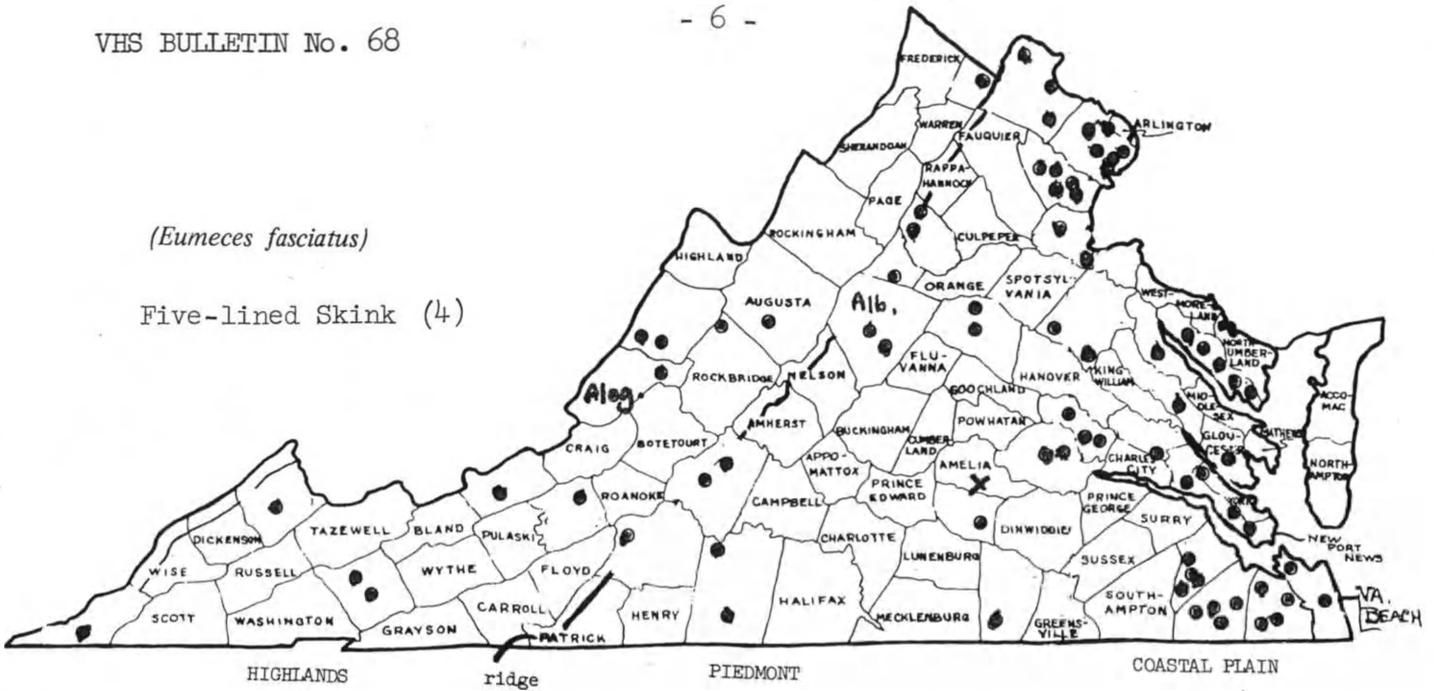
Six-lined Racerunner

(2)



(Eumeces fasciatus)

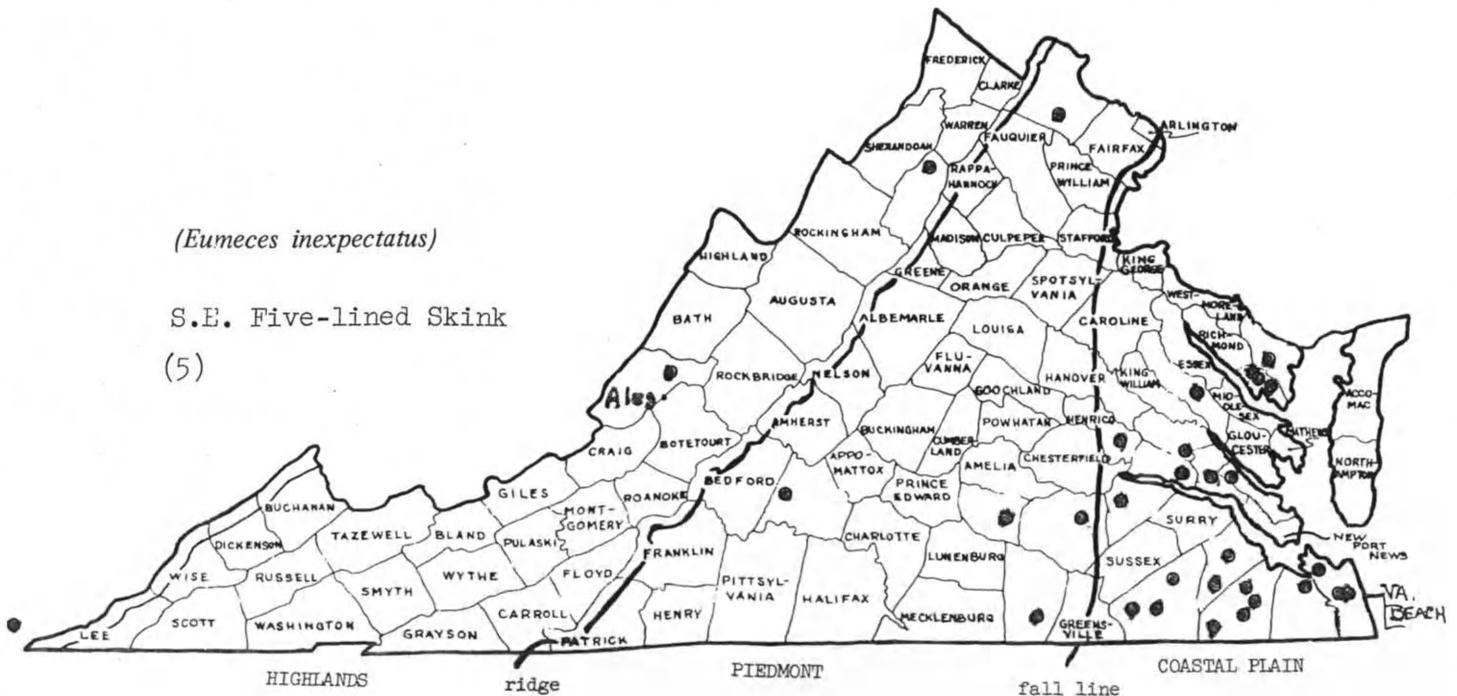
Five-lined Skink (4)



(Eumeces inexpectatus)

S.E. Five-lined Skink

(5)

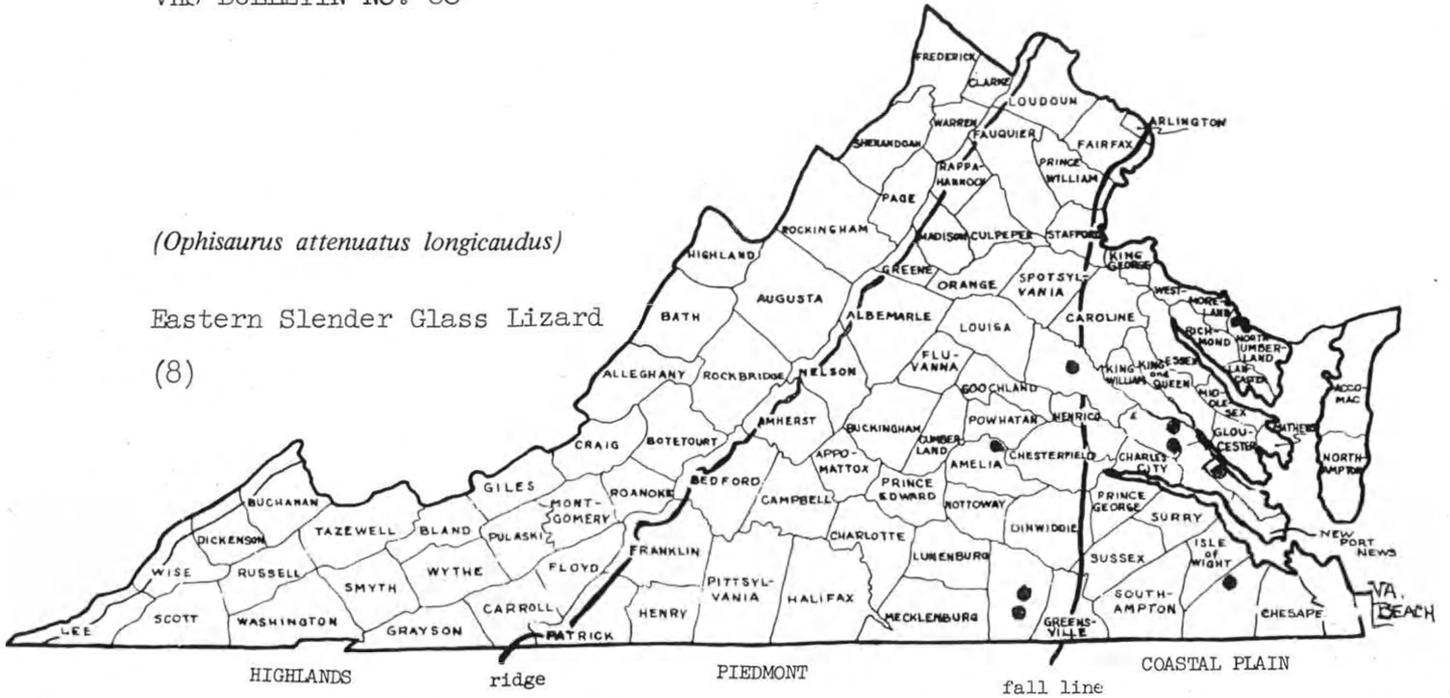


VHS BULLETIN No. 68

(Ophisaurus attenuatus longicaudus)

Eastern Slender Glass Lizard

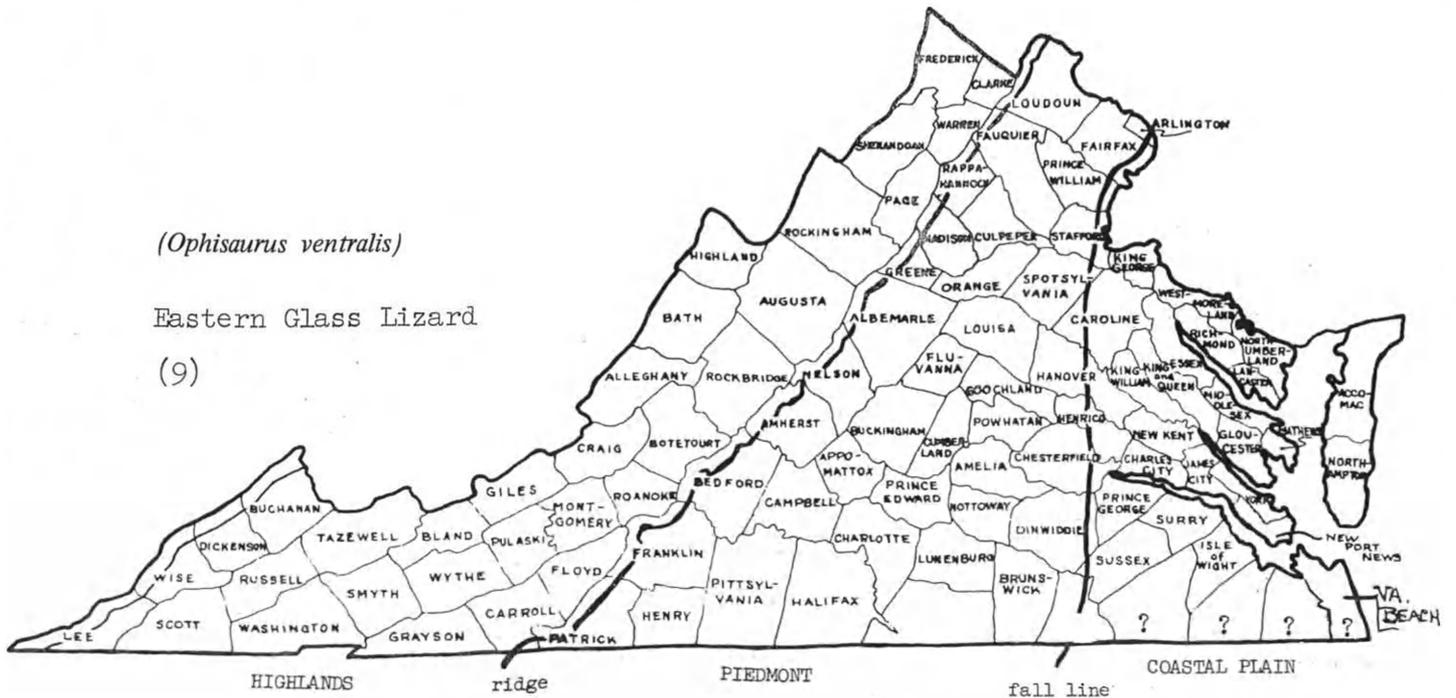
(8)



(Ophisaurus ventralis)

Eastern Glass Lizard

(9)



DISTRIBUTION OF VIRGINIAN LIZARDS

MAP KEY:

- X = County record
- L = text record (literature)
- ? = does it occur?
- e = expected
- = not expected (negative)

	G R E E N	R A C E	N. C O A L	F I V E L I N E	S. E. F I V E	B R O A D	G R O U N D	S L E N D E R	E A S T E R N	F E N C E
	A N O L E	U N N E R	S K I N K	D S.	L E N E S.	H E A D D	S K I N K	G L A S S	G L A S S	L I Z A R D
<u>C O U N T I E S :</u>										
ACCOMACK	-	?	-	e	?	?	e	?	-	X
ALBEMARLE	-	X	L	X	e	X	e	-	-	X
ALLEGHANY	-	X	X	X	X	X	X	-	-	X
AMELIA COUNTY	-	e	-	X	e	X	e	X	-	e
AMHERST	-	e	?	e	e	e	e	-	-	X
APPOMATTOX COUNTY	-	e	-	e	e	e	e	?	-	e
ARLINGTON COUNTY	-	?	-	X	e	e	X	-	-	X
AUGUSTA	-	-	e	X	?	-	e	-	-	X
BATH	-	-	e	X	?	-	e	-	-	X
BEDFORD COUNTY	-	X	?	X	e	X	X	-	-	X
BLAND	-	-	?	e	e	-	?	-	-	e
BOTETOURT	-	X	e	e	e	-	e	-	-	X
BRUNSWICK	-	e	-	X	X	X	X	X	?	e
BUCHANAN	-	-	e	X	?	-	?	-	-	X
BUCKINGHAM	-	X	-	e	e	e	e	?	-	e
CAMPBELL	-	e	-	e	X	X	e	?	-	X
CAROLINE COUNTY	-	X	-	X	e	e	e	e	-	X
CARROLL	-	?	?	e	e	-	?	-	-	e
CHARLES CITY COUNTY	-	e	-	e	X	X	X	e	-	X

DISTRIBUTION OF VA. LIZARDS cont'd:

MAP KEY:

- X = County record
- L = Literature or "text" record
- ? = does it occur ?
- e = expected
- = not expected (negative)

	G	R	N.	F	S.	B	G	S	E	F
	R	A		I	E.	R	R	L	A	E
	E	C	C	V		O	O	E	S	N
	E	E	O	E	F	A	U	N	T	C
	N		A	I		D	N	D	E	E
			L	L	V		D	E	R	
				I	E			R	N	
		R		N		H				L
	A	U	S	E	L	E	S	G	G	I
	N	N	K	D	I	A	K	L	L	Z
	O	N	I		N	D	I	A	A	A
<u>C O U N T I E S</u>	L	E	N		E	E	N	S	S	R
	E	R	K	S.	D	D	K	S	S	D
CHARLOTTE	-	e	-	e	e	e	e	e	-	e
CHESTERFIELD	-	e	-	X	e	X	X	e	-	X
CLARKE	-	-	e	X	e	-	e	-	-	X
CRAIG	-	?	?	e	?	-	e	-	-	e
CULPEPER COUNTY	-	e	-	e	?	e	e	-	-	X
CUMBERLAND	-	e	-	e	e	e	e	?	-	e
DICKENSON	-	-	e	e	?	-	?	-	-	X
DINWIDDIE	-	e	-	e	X	e	X	e	-	X
ESSEX	-	e	-	X	e	e	e	e	-	e
FAIRFAX COUNTY	-	?	-	X	e	e	X	-	-	X
FAUQUIER	-	?	?	e	e	e	e	-	-	X
FLOYD COUNTY	-	?	?	e	e	-	?	-	-	e
FLUVANNA	-	e	-	e	e	e	e	-	-	e
FRANKLIN COUNTY	-	e	?	X	e	e	e	-	-	e
FREDERICK	-	-	e	e	?	-	?	-	-	X
GILES COUNTY	-	-	?	X	?	-	?	-	-	?
GLOUCESTER COUNTY	-	X	-	X	e	X	e	e	?	X
GOOCHLAND	-	e	-	e	e	e	e	e	-	e
GRAYSON	-	-	?	e	e	-	?	-	-	e

DISTRIBUTION OF VA. LIZARDS cont'd:

MAP KEY:

- X = County record
- L = Literature or "text" record
- ? = does it occur?
- e = expected
- = not expected (negative)

	G R E E N	R A C E	N. C O A L	F I V E L L I N E	S. E. F I V E L I N E D	B R O A D H E A D D	G R O U N D D E R	S L E N D E R	E A S T E R N	F E N C E
--	-----------------------	------------------	------------------------	---	---	--	---	---------------------------------	---------------------------------	-----------------------

C O U N T I E S :

	A N O L E	U N N E R	S K I N K	E D S.	L I N E D	H E A D D	S K I N K	G L A S S	G L A S S	L I Z A R D
GREENE	-	e	e	X	?	?	e	-	-	e
GREENSVILLE	?	e	-	e	e	e	e	e	?	e
HALIFAX COUNTY	-	e	-	e	e	e	e	-	-	e
HANOVER	-	e	-	e	e	X	e	X	-	X
HENRICO COUNTY	-	X	-	X	X	e	e	e	-	X
HENRY	-	e	?	e	e	X	X	-	-	e
HIGHLAND	-	-	e	e	-	-	?	-	-	e
ISLE OF WIGHT	?	e	-	X	X	e	e	e	?	X
JAMES CITY COUNTY	-	e	-	X	X	X	X	e	-	e
KING AND QUEEN	-	e	-	X	X	e	e	e	-	e
KING GEORGE COUNTY	-	e	-	X	e	e	e	?	-	X
KING WILLIAM	-	e	-	e	e	e	e	e	-	e
LANCASTER	-	X	-	X	X	X	X	e	-	X
LEE	-	-	?	X	e	-	?	-	-	X
LOUDOUN COUNTY	-	-	?	X	X	X	e	-	-	X
LOUISA COUNTY	-	e	-	X	e	e	e	?	-	e
LUNENBURG	-	e	-	e	e	e	e	e	?	e
MADISON COUNTY	-	?	?	X	?	e	e	-	-	e
MATHEWS COUNTY	-	e	-	e	e	e	e	e	-	e

DISTRIBUTION OF VA. LIZARDS cont'd:

	<u>MAP KEY:</u>	G R E E N	R A C E	N. C O A L	F I V E L I N E	S. E. F I V E	B R O A D	G R O U N D	S L E N D E R	E A S T E R N	F E N C E
		A N O L E	R U N N E R	S K I N K	S. D.	L I N E D	H E A D E D	S K I N K	G L A S S	G L A S S	L I Z A R D
	<u>C O U N T I E S :</u>	E	R	K	S.	D.	D.	K.	S.	S.	D.
MECKLENBURG		-	X	-	e	e	e	X	e	?	e
MIDDLESEX		-	e	-	e	e	e	e	e	-	e
MONTGOMERY		-	-	?	X	e	-	e	-	-	X
NANSEMOND		L	X	-	X	X	e	X	X	?	X
NELSON		-	?	?	e	e	X	X	-	-	e
NEW KENT		-	X	-	X	X	X	X	X	-	X
NORTHAMPTON COUNTY		?	?	-	?	?	?	X	?	?	X
NORTHUMBERLAND		-	e	-	e	X	e	e	?	-	X
NOTTOWAY		-	e	-	X	X	X	X	e	-	X
ORANGE COUNTY		-	e	-	e	e	e	e	-	-	e
PAGE		-	-	e	e	X	-	e	-	-	X
PATRICK		-	?	X	e	e	?	X	-	-	e
PITTSYLVANIA		-	e	-	X	e	e	e	-	-	e
POWHATAN		-	e	-	e	e	e	e	?	-	e
PRINCE EDWARD		-	e	-	e	e	X	e	?	-	e
PRINCE GEORGE		-	e	-	e	X	e	X	e	-	X
PRINCE WILLIAM		-	e	-	X	e	X	e	-	-	X
PULASKI		-	-	?	e	e	-	?	-	-	e
RAPPAHANNOCK		-	-	?	e	e	e	e	-	-	e
RICHMOND COUNTY		-	e	-	X	e	e	e	e	-	X
ROANOKE COUNTY		-	X	?	e	e	e	e	-	-	X
ROCKBRIDGE		-	-	e	X	e	X	?	-	-	X
ROCKINGHAM		-	-	e	e	?	-	?	-	-	X
RUSSELL		-	-	?	e	e	-	?	-	-	e
SCOTT		-	-	?	e	e	-	?	-	-	X

DISTRIBUTION OF VA. LIZARDS cont'd:MAP KEY:

X = County record
 L = Literature or
 "text" record
 ? = does it occur?
 e = expected
 - = not expected
 (negative)

C O U N T I E S :

	G R E N	R A C E	N. C O A L	F I V E L I N E	S. E. F I V E L I N E	B R O A D H E A D E D	G R O U N D S K I N K	S L E N D E R G L A S S	E A S T E R N G L A S S	F E N C E L I Z A R D
SHENANDOAH	-	-	e	e	e	-	?	-	-	X
SMYTH	-	-	?	X	e	-	?	-	-	e
SOUTHAMPTON	?	X	-	e	X	e	X	e	?	e
SPOTSYLVANIA	-	e	-	e	e	e	e	-	-	X
STAFFORD COUNTY	-	X	-	X	e	e	X	-	-	X
SURRY COUNTY	-	e	-	e	e	X	X	e	?	X
SUSSEX COUNTY	-	e	-	e	e	X	e	e	?	e
TAZEWELL	-	-	?	e	e	-	?	-	-	e
WARREN	-	-	e	e	e	-	?	-	-	e
WASHINGTON COUNTY	-	-	?	e	e	-	?	-	-	e
WESTMORELAND	-	X	-	e	e	e	e	e	?	X
WISE COUNTY	-	-	e	e	e	-	?	-	-	X
WYTHE	-	-	?	e	e	-	?	-	-	X
YORK	-	e	-	X	X	X	X	X	?	X
(1) NEWPORT NEWS	-	X	-	X	e	e	X	e	?	X
(2) HAMPTON	-	X	-	e	e	e	X	e	?	X
CITY of NORFOLK	-	X	-	X	X	e	e	e	?	X
(3) CHESAPEAKE	?	e	-	X	X	X	X	e	?	X
(4) VIRGINIA BEACH	?	X	-	X	X	X	X	e	?	X

Physiographic Regions:

HIGHLANDS	-	-	X	X	-	?	?	-	-	X
VALLEY AND RIDGE	-	e	e	X	X	e	X	-	-	X
PIEDMONT	-	X	-	X	X	X	X	X	-	X
COASTAL PLAIN	-	X	-	X	X	X	X	X	-	X
GREAT DISMAL SWAMP	L	X	-	X	X	X	X	X	e	X

Formerly: (1) Warwick County; (2) Elizabeth City County; (3) Norfolk County; and
 (4) Princess Anne County. Records separated accordingly.

WHERE TO FIND IT:

COVER: Green Anole head as seen from above, note the "pineal eye" (center). Drawing was made from a photograph which appeared in a MEDICAL TRIBUNE account of work on photo-receptor-like (light sensitive) cells of the tiny pineal organ of lizards.

The median, or parietal eye reaches its structural zenith in the lizards, especially in the iguanid lizards. In these, it possesses a retina, cornea, and lens. Examination of these tissues by the conventional (light) microscope shows that the parietal eye of Anolis c. carolinensis resembles the corresponding structures of the lateral eyes. (See SCIENCE magazine for 18 February 1972, Vol.175 No. 4023, pp. 763-764.)

LIZARDS (species #)
eastern glass (9)
eastern slender glass (8)
green anole (1)
northern fence (10)
racerunner (2)

SKINKS
broad-headed (6)
five-lined (4)
ground (7)
northern coal (3)
SE five-lined (5)

VHS B# 67 Description:
Diagrams of scalation inside front cover: "A"

Common (standard english) and scientific names; 1

Key to Va. lizards, by Neil D. Richmond 2-3

Descriptions:
Anole, racerunner, and five-lined skink 4

SE five-lined skink, coal and broad-headed skinks 5

Ground skink, eastern glass lizard, and slender glass lizard 6

Northern fence lizard 7

Identification drawings:

"A" to "E" (species are numbered, not labelled, to minimize prejudice.)

INDEX

description VHS B#67
key p.2, 6, and dwg "B"
2, 6, drawing "B"
2, 4, cover, "B"
2, 7, drawing "E"
2, 4, " " "B"

key p.3, 5, drawing "C"
3, 5, " " "D"
3, 6, " " "E"
3, 4, " " "C"
3, 5, " " "D"

References listed at p.7

VHS B# 68 Distribution:

General notes on distribution of Virginia lizards
General: page 1
Specific: pages 2-4

Distribution maps:

Anole, racerunner . . .5
Five-lined skinks . . .6
Broad-headed, and coal skinks7
glass lizards8
ground skink and fence lizard9

County distribution of Va. lizards:

ACCOMACK-CHARLES CITY 11
CHARLOTTE-GRAYSON 12
GREENE-MATHEWS 13
MECKLENBURG-SCOTT 14
SHENANDOAH-YORK 15

Former counties 15
Distribution by physiographic region 15

distribution VHS B#68
notes, p.4; map p. 8
p.4; p. 8
p.2; p. 5
p.4; p. 9
p.3; p. 5

notes, p.3; map p. 7
p.3; p. 6
p.4; p. 9
p.3; p. 7
p.3; p. 6

The editor, Franklin J. Tobey, Jr., thanks all those who sent data for use in this bulletin.

Credits: Drawings and diagrams, as noted on illustrations "A" to "E"

Cover: Inspired by a photograph carried in "MEDICAL TRIBUNE" N.Y.