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THE TIMBER RATTLESNAKE ON VIRGINIA'S
UPPER PIEDMONT

By William H. Martin, III (Leesburg)

For several years I have been investigating Virginia's Upper Piedmont in an effort to define the range of Timber Rattlesnakes- (Crotalus h. horridus) east of the Blue Ridge. My studies indicate an eastward extension along the James River and isolated colonies in the Bull Run Mountains, and on Smith and Turkeycock Mountains.

1. Bull Run Mountains (Fauquier & Prince William Counties): I have collected ten rattlers on various ridges of the Bull Run Mountains.

2. James River (Albemarle, Nelson, Amherst, Buckingham and Appomattox Counties): George Brooks of Shipman (Nelson Co.) has the hide of a specimen killed on the James River between Norwood and Wingina, Nelson County. Rattlesnakes are reported along both sides of the James as far downstream as Scottsville, Va. This is not, however, an isolated population as they are apparently found in the hills throughout Amherst and Nelson Counties, and as

far north as Charlottesville in Albemarle County. George Brooks has a preserved specimen from Piney Mountain in Nelson County.

3. Smith Mountain (Bedford & Pittsylvania Counties): Sam Pickrel, game warden from Gretna (Pittsylvania Co.) has sent me a photo of a rattlesnake he killed locally.

4. Turkeycock Mountain (Franklin & Henry Counties): A mounted rattlesnake from Turkeycock Mountain is in Clifts Sporting Goods Store in Martinsville, Virginia.

The U.S. National Museum has a specimen from the Rapidan River in Culpeper County, but I can find no evidence of a colony there. It may have been washed down river in a flood.

Comments and additional records should be brought to the attention of the author via the VHS Secretary so that worthy contributions may be carried in future VHS Bulletins.

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VHS OBJECTIVES:

ADOPTED IN 1958

- (1) Scientific study of the state's reptiles and amphibians.
- (2) Improvement of records on collecting data.
- (3) County surveys and exchange of verified information.
- (4) Broader public understanding in the interest of conservation.
- (5) More accurate news reports on reptiles and amphibians.
- (6) Deposit of needed specimens for record in permanent collections for scientific-educational purposes.

SOME OBSERVATIONS ON THE EASTERN COTTONMOUTH

By Jeffrey L. Richmond (Ashland)

Three adult Eastern Cottonmouths (*Agkistrodon p. piscivorus*)* were captured in the wild in North Carolina on September 1, 1964. They were found near Hallsborough along the side of a road that runs thru a wild, very wet, swamp. Cottonmouths are reported to be numerous in that area. These three were found in the late morning in both sunny and shady areas. In all three cases, the snakes had hidden themselves in thick clumps of grass. They range in size from two and a half to three feet.

One specimen, in the process of being transported from the place captured, had given birth to eight young. The mother, initially a dark specimen, is beginning to shed and her pattern should become more apparent. Her condition is quite poor. Her body is thin and she is very slow. She shows very little reaction to handling. The other two specimens are quite active and hard to handle. All three specimens have been kept in a collecting bag since the day of their capture -- a period of ten days.

The date of birth of the babies is not certain, but they had not shed their first skin which occurs within three to five days after birth. They are quite strikingly marked. The ground color in the babies is very pretty, being almost a pink, or more nearly a grey with

a light pinkish hue. There seems to be little difference in length, all of them being within a quarter inch of ten-and-a-quarter inches. The crossbands are deep chocolate brown with light ground color centers. The belly appears as the same basic ground color with a milky film over it. There are spots the same color as the bands in the light area within the band. The number of these spots in a single crossband may range from one to four. A single spot is centered within the band's light area. Two spots are arranged vertically. Three or four spots may be arranged in triangles, diamonds, or in a vertical row.

The temperament of these juveniles is quite horrid. They strike at any movement. They also seem intent upon advertising their name. They yawn continuously. However, their fangs never seem to erect in the yawning. In the adult specimens, the yawn is accompanied by the erection of the fangs about half of the time. Care is being taken to see that all live, so no attempt was made to count dorsal scale rows or ventral scales. The sulfur yellow tail, present in all cases to some degree, is brilliant in about half and duller or mottled in the remainder.

*Range in Va. restricted to S.E.

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FOR MORE ON THE GEOGRAPHIC DISTRIBUTION OF THE
VIRGINIAN POISONOUS SNAKES, SEE VHS SPECIAL
BULLETINS No. 37 and No. 38.

HERPETOFAUNA OF SURRY COUNTY, VIRGINIA

by Roger Henry deRageot* (Norfolk)
VHS President (1963-1964)

While teaching nature at the Pipsico Scout Reservation, Spring Grove, Virginia, I had a very good opportunity to study herpetofauna of that part of the Lower Piedmont.

Collecting at Pipsico this year was far more rewarding than last. Last year ('63) was extremely dry. Although the first two weeks of camp this year ('64) were extremely dry too, the following three weeks were fairly wet. We had numerous thunderstorms. It is as a result of this, I believe, that reptiles proved far more active. About 35 species of reptiles and amphibians were collected on the Pipsico Reservation within a period of five weeks. This, in my estimation, is quite good for an area slightly under a thousand acres. I firmly believe that longer and more diligent collecting will easily turn up at least a dozen more species in this area of Surry County.

Camp Pipsico, largest Scout Reservation in Tidewater, is situated on the shore of the James River in what I would consider the Lower Piedmont. It is under the able leadership of Mr. Joseph Wilson, Camp Director and Scout Executive of Tidewater Area Council, BSA, headquartered in Norfolk.

Here are the results:

SNAKES: ()=number collected.

Rough Green Snake (12) (Opheodrys aestivus): One of these, a big female, laid six eggs on June 12.

* Roger H. deRageot is a co-founder of the Va. Herpetological Society.

Our largest Rough Green Snake, the one which laid the six eggs, swallowed another female Rough Green Snake only slightly smaller than herself. The one which was eaten carried eggs. The largest female Rough Green died several days after the feast. This death can be attributed to rough handling since I was unable to prevent its being handled following this large meal.

Eastern Smooth Earth Snake (Haldea valeriae): One juvenile captured.

Eastern Worm Snake (Carphophis a. amoenus): (50) common. Several carried eggs and one laid two eggs on July 17. These eggs were very large for such a small snake and very elongated. The eggs measured 25mm by 7mm. Since no eggs were left in the ovaries, this apparently was the full complement.

Northern X Southern Ringneck Snake (Diadophis punctatus) (14) common. All taken this past year showed spotted undersides though none of them had the interrupted neck-ring that is typical of the southern p. punctatus. One example collected last year showed no spots at all underneath and only two had a few spots. All showed complete ring pattern on neck.

Eastern Hognose Snake (Heterodon p. platyrhinos): (1) Although known to be common, only one captured!

Northern X Banded Water Snake (Natrix sipedon): Common along the James River. These exhibit a color

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Herpetofauna of Surry County, Va., (continued):

pattern quite different from the Norfolk specimens.

Black Rat Snake (Elaphe obsoleta)
(12) As usual, they proved excellent and voracious feeders. A very large one this year, and one very large one last year, in captivity would swallow full-grown Gray Squirrels greedily when presented.

Mole Snake (Lampropeltis calligaster rhombomaculata): One subadult, one large adult collected in 1964. Both refused food except skinks. The large adult collected in 1964 had retained a full color pattern. Last year, one subadult, and one large adult also were collected. The subadult was preserved and the large adult was kept alive. This adult had lost most of its pattern as is often the case in this king snake. It was olive brown with a trace of a pattern. It proved to be a hearty eater, feeding on both skinks and fence swifts with equal relish. Later, I brought it with me to the Botanical Gardens where it ate several common mice and one Green Snake. It finally escaped. Bats, which were presented to it on several occasions, were refused.

It is interesting to note the wide latitude of food preferences between individual snakes of the same species. This species is apparently common at Pipsico, for despite its secretive habits, four were collected in two years. The period of collecting extended five weeks in each case. Of interest also is the apparent absence of Eastern King Snakes (Lampropeltis g. getulus) at Camp Pipsico where this species is, apparently, replaced by the Mole Snake.

Black Racer (Coluber constrictor)
(6) All were kept in a big cage and were good feeders and would take both fence swifts and skinks with apparent ease. This may have been due to the fact that the cage was kept in the open air, for this snake is a very poor feeder. One racer, caught in the field with a lump on its stomach, regurgitated another racer and a full-feathered white-eyed vireo shortly after being placed in captivity.

Eastern Garter Snake (Thamnophis s. sirtalis) (1)-1963; (1)-1964.

Northern Copperhead (Agkistrodon c. mokeson): This species is so common as to prove a real hazard to the campers. Every year two or three campers get bitten. This year, fortunately, there were no casualties. I collected 12 within a week. Following heavy summer rains, reports of copperheads come from everywhere at Pipsico. On one night I was called by a scoutleader and tracked a copperhead within one campsite with the aid of my flashlight and caught it. Five minutes later, on the way to my tent, I stepped on another. Fortunately, I was wearing riding boots. This one I caught, also. The next morning my assistant naturalist woke up with a copperhead coiled along the base of his tent floorboard, a few inches under his nose! He called me and I caught this one. Next day after that I was rudely awakened at 6:30 a.m. by the camp cook who had located a copperhead on a path near a campsite. The afternoon of that same day, one of the scout-

(continued on page five)

Herpetofauna of Surry County, Va., (continued)

masters walked into the nature area holding a large live copperhead. I could go on. As a result of this, I have had an excellent chance to study the movements of these pit-vipers and can say, with fair certainty, that wet summer weather is definitely related to copperhead activity.

Mr. Joseph Wilson, camp director, stated that the first year the camp was opened 18 copperheads were captured during the first week. Two bites occurred last year, 1963, after I left.

Copperheads in Surry seem to be an intergrade like the ones from SE Virginia and northern North Carolina.

FROGS AND TOADS:

Eastern Gray Treefrog (Hyla versicolor) abundant.

Pine Woods Treefrog (Hyla femoralis) is common as attested by a large chorus after a heavy rain.

Bullfrogs (Rana catesbeiana) are common, although not in abundance.

Green Frog (Rana clamitans melanota) common.

Pickerel Frog (Rana palustris) a few taken in streams.

Eastern Narrow-mouthed Frog: common. (Gastrophryne c. carolinensis)

Eastern Spadefoot (Scaphiopus h. holbrooki) common.

American Toad (Bufo terrestris americanus) common.

Fowler's Toad (Bufo woodhousei fowleri) common.

SALAMANDERS:

Northern Dusky Salamander (Desmognathus f. fuscus): Common in the little clear water streams between the numerous gullies at camp.

Northern Two-lined Salamander (Eurycea b. bislineata) not common.

Three-lined Salamander (Eurycea longicauda guttolineata) common.

Northern Red Salamander (Pseudotriton r. ruber) (1) Adult caught under a log in 1963.

Slimy Salamander (Plethodon g. glutinosus) common.

The little Red-backed Salamander, (Plethodon c. cinereus) so common elsewhere, has not been observed at Pipsico.

Amphiuma (Amphiuma m. means) not taken by me, is said to have been taken in good numbers other years.

TURTLES:

Eastern Mud Turtle (Kinosternum s. subrubrum) (12) common; adults. One hatchling collected on July 27.

Common Snapping Turtle (Chelydra s. serpentina) common; (3) Two juveniles and one adult collected.

Spotted Turtle (Clemmys guttata) not collected by the author, but several reported to have been taken after I left last year (1963).

Yellow-bellied Turtle (Pseudemys s. scripta) along the James River.

Eastern Box Turtle (Terrapene c. carolina) common. Juveniles and one hatchling still showing an umbilical scar taken during first week of June, 1964.

Herpetofauna of Surry County, Va., (continued)

LIZARDS:

Eastern Slender Glass Lizard (Ophisaurus attenuatus longicaudus)(1) large adult with complete tail.

Five-lined Skink (Eumeces fasciatus) common.

Broad-headed Skink (Eumeces laticeps) very common.

Ground Skink (Lygosoma laterale) (2) Adults, collected this year.

Fence Lizard (Sceloporus undulatus hyacinthinus) common. One female deposited three eggs at the base of an oak tree in a small burrow she had excavated. This female was captured and laid seven more eggs in captivity on June 5, 1964.

Norfolk, Virginia.. (1964)

Roger H. deRageot

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FORMER VHS MEMBER DOING LIZARD RESEARCH ON HOT SOUTHWESTERN SANDS

(excerpts from the New York Times)
August 3, 1964

One of the hottest scientific laboratories in the U.S. is being operated in the sand hills of West Texas. It is the site of research studies using native and imported lizards of the genus Uta.

The major goal of the program is to determine what environmental factors affect the native species of Uta lizard. Other projects include studies of radiation effects on specimens under natural conditions, attempts to cross native Uta with Mexican species, behavior studies and experimental studies on fat cycles.

Project director is Dr. Donald W. Tinkle, Professor of Biology at Texas Technological College, Lubbock.

Studies are conducted under a National Science Foundation grant and a contract with the U.S. Atomic Energy Commission.

Dr. Tinkle is aided by a small group of graduate students from several American universities. Among them is Mr. Gary W. Ferguson, a graduate of Tulane University, a former VHS member who lived on Lynn Haven Drive, Hampton, Va., in 1958.

The Uta do not wander more than 60 feet during their one-year life span. About 1,000 lizards are processed each year -- or 3,000 captures and recaptures. Average temperature of the sand for ten weeks in summer is 130 degrees F. Highest recorded temperature: 150°.

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SEND YOUR BULLETIN CONTRIBUTIONS TO THE VHS SECRETARY, SOON!

COLLECTING NOTES -- AUGUSTA and ROCKBRIDGE COUNTIES, VIRGINIA:

by Henry M. Wilbur (Waynesboro)

When I received the Special VHS Bulletin on the Snakes of Virginia I was surprised that so little collecting had been done in my part of the state. I have several species to add, if not recorded.

I am a Junior at Duke University majoring in zoology. I hope to do graduate work in preparation for a career as a college teacher with a major interest in herpetology. I have done quite a bit of collecting in Augusta and Rockbridge counties and with the Duke Zoology Dep't. The specimens listed below are in my collection. (County records*ft)

AUGUSTA COUNTY, VA.

- *Common Snapping Turtle
(Chelydra s. serpentina)
- *Eastern Painted Turtle
(Chrysemys p. picta)
- Eastern Ribbon Snake
(Thamnophis s. sauritus)
- Eastern Milk Snake
(Lampropeltis d. triangulum)
- Northern Copperhead
(Agkistrodon c. mokeson)
- Marbled Salamander
(Ambystoma opacum)
- Red-spotted Newt
(Diemictylus v. viridescens)
- *American Toad
(Bufo terrestris americanus)
- Fowler's Toad
(Bufo woodhousei fowleri)
- Northern Cricket Frog
(Acris c. crepitans)
- *Spring Peeper (Hyla crucifer)
- *Upland Chorus Frog
(Pseudacris triseriata feriarum)
- Bullfrog (Rana catesbeiana)
- Green Frog (R. clamitans melanota)
- Pickerel Frog (Rana palustris)

ROCKBRIDGE COUNTY, VA.

- *Northern Copperhead
(Agkistrodon c. mokeson)
- Timber Rattlesnake
(Crotalus h. horridus)
- Northern Water Snake
(Natrix s. sipedon)
- *Red-bellied Snake
(Storeria occipito-maculata)
- *Eastern Hognose Snake
(Heterodon p. platyrhinus)
- Eastern Worm Snake
(Carphophis a. amoenus)
- *Five Lined Skink
(Eumeces fasciatus)
- Northern Fence Lizard
(Sceloporus undulatus hyacinthinus)
- Red-backed Salamander (two phases)
(Plethodon c. cinereus)
- Slimy Salamander
(Plethodon g. glutinosus)
- Red-spotted Newt
(Diemictylus v. viridescens)
- *Spring Peeper (Hyla crucifer)
- *Green Frog (Rana c. melanota)

The VIRGINIA FEDERATION OF GARDEN CLUBS' NATURE CAMP, near Vesuvius, Rockbridge County, Va. has been in operation for 22 years, the last 12 in the present location. The camp is dedicated to educating the youth of the state in nature study and conservation. Courses taught: soil conservation, botany, geology, entomology, astronomy, meteorology, ecology, ornithology, forestry, and herpetology. I have worked there for the last five years; the past two years as head counselor of boys and, as the herpetology instructor. The camp's permanent buildings include a wildlife museum. Preserved specimens held there may likely include some county records.

(Continued on page eight)

Letters to the Editor:

Dear Editor:

Dr. John T. Wood, who preceded me as Information Officer here at the Virginia Institute of Marine Science and was active* in the VHS for a number of years, very kindly had my name placed on the VHS mailing list to receive the various issues of the Bulletin. Many times it has contained helpful information, but I am especially pleased to have Bulletin No. 37 which is entitled: "An Aid to Identification of the Snakes of Virginia."

We have not had anyone on our staff specifically interested in herpetology since W. Leslie Burger was with us in 1958, but we do from time to time have requests for information about snakes and I am always glad to use your bulletins for supplying it. Best wishes.

signed: Robert S. Bailey
Information Officer
Va. Inst. of
Marine Science

(Gloucester Point, Va.)

* Dr. John T. Wood was the first VHS president and was succeeded by W. Leslie Burger and Roger H. deRageot.

SEND IN YOUR COLLECTION NOTES !!!

Augusta-Rockbridge Notes: (continued from page seven)

At Garden Clubs of Va. Nature Camp:

Northern Dusky Salamander
(Desmognathus f. fuscus)Northern Red Salamander
(Pseudotriton r. ruber)*Northern Ringneck Snake
(Diadophis p. edwardsi)

(* County record. ft)

Dear Editor:

I have recently completed reading the Special Bulletin on the Snakes of Virginia and am greatly impressed. This is a great step in furthering our knowledge of the Va. herpetofauna. ... Since I live in Virginia Beach I do much of my collecting in this, and in the Norfolk areas.

Virginia Beach, Va.

Brown Water S. (Natrix taxispilota)
No. Red-bellied S. (Storeria)
Eastern Hognose (Heterodon) common
Rainbow Snake (Abastor) Pungo, Va.

Norfolk, Va.

E. Garter Snake (Thamnophis sirtalis)
Black Racer (Coluber c. constrictor)
Scarlet King (Lampropeltis doliata)
(Dismal Swamp)

Pulaski County, Va.

Timber Rattlesnake (C. h. horridus)
(near Snowville, Va.)

Roanoke County, Va.

Timber Rattler dead on Blue Ridge
Parkway south of Roanoke.

Montgomery County, Va.

Black Racer (near Mountain Lake)

Bedford County, Va.

Corn Snake (Elaphe g. guttata)
on Rte #400 near Bedford, Va.

signed: Gary M. Williamson
(Va. Beach)

STATEWIDE MEETING, 1964 --"SUCCESSFUL MEETING, INTERESTING PROGRAM"

The VHS STATEWIDE MEETING, held at Camp MONOCAN, BSA, near Nellysford in Nelson County, Va., October 3-4, was a success.

Among those present were: Dr. James A. Peters, US National Museum, Dep't of Amphibians and Reptiles; Dr. & Mrs. George R. Brooks, College of William & Mary, Williamsburg, Va.; Dr. James H. Rust (& family) Walter Reed Army Medical Center, Wash. D.C.; Dr. Robert Nicodemus, Montgomery Junior College, Silver Spring, Md.; Mr. Homer Mumaw, Biology Dep't, E. Mennonite College & High School, Harrisonburg, Va., and William P. MacLean, Biol. Dep't, Princeton U. Princeton, N.J.

Dr. James A. Peters, USNM, the author of "Dictionary of Herpetology" (Stechert-Hafner, Inc. NYC) -- gave an excellent illustrated talk on the Snakes of Ecuador covering the several life zones from the lowlands through the foothills to the high tropical rain forests.

Each member was introduced and had an opportunity to tell about his interests or current projects.

Our hosts were the PIEDMONT AREA COUNCIL, BOY SCOUTS OF AMERICA, -- headquartered at Lynchburg, Va.

Representing the camp were: Mr. & Mrs. Ottinger, Nellysford, Va. Mr. Eugene Ramsey of Stuart's Draft, Va., and SW-VHS Chairman Costello M. Craig (and family) from Bedford, Va., all good scouts!

The Officers and members wish to thank all those who contributed to the success of the meeting: films, slides; coaching, encouragement, advice, arrangements of facilities and enthusiastic hospitality; also patience! T. Darrell Drummond of Rockville, Maryland, was our film source and projectionist. The VHS evening show started with a round of applause for "Pop" Ottinger, BSA ranger, and the Piedmont Area Council. Those who didn't come missed a good show and exhibits.

FJT

 Members attending the statewide meeting came from these communities:

Arlington	Falls Church	Mechanicsville	Washington, DC
Bedford	Fredericksburg	Norfolk	Bethesda, Md.
Chester	Hampton	Richmond	Chevy Chase
Charlottesville	Harrisonburg	Stuart's Draft	Kensington, Md.
Princeton, N.J.	Silver Spring, Md.	Williamsburg	Rockville, Md.

DON'T MISS THE NATIONAL ZOO (D.C.) MEETING, JANUARY 9, 1965, at 4:30 pm!

Members, friends, and guests will meet in the Reptile House at the National Zoological Park, Rock Creek, Washington, DC.

THIS IS YOUR INVITATION TO ATTEND THE

ANNUAL WINTER MEETING AT THE NATIONAL ZOOLOGICAL PARK

DATE: JANUARY 9, 1965, (Sat.) TIME: 4:30 p.m. to 6:30 p.m.

MEET ON THE MAIN FLOOR OF THE NZP REPTILE HOUSE AFTER 4 p.m.

There will be no meeting if there is a heavy snowfall (4 inches). If less than 4" snowfall, someone will be there to show films, discuss matters of interest, and present an interesting program.

We have a program planned that will prove as interesting as the statewide meeting presentations. We will have at least two, and probably three, scientists on the speakers' platform to present illustrated talks on a foreign land and its reptiles; snakebite symptoms, treatment, toxicology, and related matters. Be there!

VHS regrets the necessity of moving off of the Saturday "between Christmas and New Year's Day." This year the Saturday after Xmas is December 26. Next year the holidays pre-empt the Saturdays! Also, the Herpetologists' League meets in Knoxville, Tennessee, during the Christmas holidays -- and some of our members and key speakers will be there; not in Washington, D.C. Also, the Association for the Advancement of Science meets in Montreal, Quebec, during the holidays and some of our members and officers may be there. Under the circumstances, we think the January 9 date is the best possible solution.

SEASON'S GREETINGS FROM THE OFFICERS AND MEMBERS OF VHS: 1964

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