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VIRGINIA Herpetological Society

Editor's Note by yona britto



Hello! I'm the new editor. You may have seen me on Facebook identifying snakes in local wildlife groups or posting from my page Snake Facts Saturday. I love "nerding out" identifying herps, fungi, and plants. Learning those subtle differences and being able to spot them in the wild is so satisfying! Whether that's counting costal grooves on salamanders, skin texture on frogs, or head markings on snakes. How do you like to enjoy nature?



This issue:

Editor's Note	01
<u>Wood Turtles</u>	
<u>Wood Turtles (cont.)</u>	03
Creature Feature: Eastern Fence Lizard	04
Fence Lizard Coloring Page	
<u>Snakes in Winter</u>	
<u>Photo Contest Winners</u>	07
Snake ID and Snakebite Presentation	
<u>Art Feature</u>	
Adventures in Herp Education	
Adventures in Herp Education (cont.)	11
Brownsville Survey Results	12
Prince William Forest Park Survey Results	13
<u>Mattaponi WMA Survey Results</u>	14
<u>Mattaponi WMA Survey Results (cont.)</u>	15
Herp Quiz	
Crossword	17
Infographics	

Wood Turtles: An Endangered Species!



Several times each Spring and Fall I grab my chest waders and head out to a meet up point where I excitedly see my fellow turtle surveyors. Most of us met through attending symposia, conversing online, fundraising or education events and sometimes just by knowing other "turtle people." My first and most frequently attended survey group, to which I belong, is conducted by theTurtleRoom. I found myself joining in on the organization's very first official survey in the Fall of 2017, after connecting with the project leads at the Turtle Survival Alliance Symposium. The objective of these surveys is to capture long-term population monitoring data on a fascinating and cryptic species of North American freshwater turtle; the Wood Turtle (Glyptemys insculpta).

After obtaining the correct permit to conduct scientific research and collect data from this species of special concern, these surveys (all of which I have assisted in) follow a protocol outlined by the Northeast Wood Turtle Working Group. Turtles are monitored within a designated 1 kilometer stretch of stream, each segment is usually surveyed 3 times each Spring and Fall as per the protocol guidelines. Once the lead surveyor starts the clock, each member begins to systematically search along the segment in the water, under logs and leaf litter and even along the bank and flood plain for Wood Turtles. Once a turtle is found, the time is stopped so that data processing time is not included in the one hour allotted for search time. We collect data such as time, location, description of behavior and habitat, sex, estimated age, size measurements, weight and probably my favorite perimeternew or recapture. Surveys may take a few hours or a full day depending on weather and other stream conditions which typically impact the number of turtles we might chance upon. Wood Turtles have captivated my interest from the very first time I was introduced to them as an undergraduate herpetology student. All the work I've done with them and observations made have been in the southernmost region of their entire range spanning from Pennsylvania to Virginia. My field experiences have allowed me to see into their secretive habits, interactions, and habitat preferences as well as learning population and even particular individual's quirks. Because these turtles are often very unique individuals and might get recaptured

The most frequent interaction that we hope for is male on top of female pairs, typically underwater in shallow areas near the bank. This is always exciting to see since the surveys are designed to capture sex ratios best during the mating seasons because in the fall females may not be back to the aquatic system, and that would result in observing less accurate and skewed sex ratios in the population.



On other occasions I've witnessed male on male interactions, where they compete for access to a certain pool or stream segment, potentially places where the females have habitually returned to the stream first. These interactions have included aggressors chasing, shoving, biting, and climbing on top of other males, sometimes the males are found sitting submerged in water as a mating pair would.

Due to this species inquisitive and intelligent nature, sometimes upon release, certain bold individuals have been observed viewing or even chasing my goPro underwater camera. I speculate that the one individual (nicknamed Runty) saw the orange portion of the case, and may have mistaken it for a male to chase off or the female he was found nearby.

BY MIRANDA MCCLEAF

Wood Turtles: An Endangered Species! (continued)

Throughout Spring and Fall, the weather often varies greatly. Some days the water temperature may be chilly while air temps rise and the sun comes out – this often encourages basking behaviors which adds a new element to surveying waterways – checking the stream banks. These basking turtles are often dry and caked with mud or (in the spring) munching on new vegetation.

Many older turtles appear with injuries, sometimes inflicted by other Wood Turtles in territorial and mating scuffles, but we do see a select few that appear intact with even tail tips and one individual that's shell is so worn it is smooth from water and rocks over time. Of the injuries, we see limbs chewed off from predators like raccoons, but also due to the proximity of agricultural fields to streams, we see healed chips, cracks and punctures from incidences with farm equipment. It is a heartbreaking truth to realize that these are only the turtles that survived the injuries, we will never know the full impact of losing turtles (often nesting females) that are killed by these incidences.

I can't talk about Wood Turtles without mentioning their overall range decline due to the many plights to their survival. Since they are a long-lived species with site fidelity they are at the mercy of a changing habitat, which can be threatened by the increasing human development. This is especially true with turtle habitat being fragmented by roadways or farming fields.





The last big threat seems to be less realized; Wood Turtles are being poached for the illegal trade, and due to the species' life history traits one adult may make or break a population. If you are able to enjoy these magnificent turtles in the wild, please don't freely share your location (below county level) on social media!

Unfortunately, Wood Turtles are at greater risk of illegal collection when their locations are known by many, for this reason these and many surveys are by invitation only to protect the turtles. You can learn about the project I primarily work on and see more pictures by visiting <u>theTurtleRoom</u>.

Hatchlings and juveniles have been typically challenging to spot and for the most part unpredictable, however across the survey sites these young age classes have been observed at surveys. It's a lucky chance and I sometimes recount the very memorable time when I saw a depression under a decomposed tree trunk and upon reaching my hand in the dry leaf litter, I unearthed a juvenile in its second year! It's not every survey we get that lucky! I often wonder how many turtles that we come very close to revealing but without being able to see a portion of its shell, surveys are a timed guessing game at best.





Eastern Fence Lizard

Sceloporus undulatus

Description

They are medium sized, stout-bodied lizards with rough strongly keeled scaling and an average snout to vent length of 3.4 inches (86 mm) with a total length of 7.2 inches (184 mm). Eastern Fence Lizards have a grayish brown appearance, but can also be mostly all black or brown. Sexual dimorphism is present in this species, as females are generally larger than males and typically uniform in color. Males are smaller than females, uniformly colored, but possess bright blue patches on their chin, and undersides which become more intense during breeding season.

Behavior

Eastern Fence Lizards are diurnal (active during the day) and can often be found basking in the sun, even during cooler seasons such as fall and spring. At night, the lizards find refuge under bark, or in crevices under rocks or logs to rest. While the lizards can be found on the forest floor, they typically are at home on the sides of tree trunks making them one of the most arboreal species of lizards in Virginia. When threatened this species retreats to the nearest tree, quickly scaling it and remaining on the opposite side of the tree from the predator, in the hopes their cryptic coloring will help blend them in to the bark and the predator will give up.

Diet

Eastern Fence Lizards eat a wide variety of invertebrates including: beetles, ants, grasshoppers, crickets, moths, spiders and stink bugs. They are visual hunters that employ a sit-and-wait tactic when capturing prey. Often the lizards will sit in a suitable spot and watch for movement, and wait for prey such as beetles to come within range and then capture them. Females have been documented to eat more insects during spring months in an effort to conserve energy for laying eggs.





Due to their close association with pine trees this species is often referred to as "Pine-tree lizards" or "pine lizards."

During the winter these lizards employ a form of hibernation called brumation, where their activity, heart rate, respiratory rate and body temperature drop. Since they are ectothermic, warmer temperature days may entice them to come out to bask in the sun, even during winter.

When captured Eastern Fence Lizards employ a range of tactics to deter predators including playing dead, biting, and breaking off their tail.

BY MARC MAINS

Reproduction

Courtship and breeding season for Eastern Fence Lizards usually occurs from late spring to early summer. Males are highly territorial during this time, often displaying head bobbing and push-up like motions to defend territories from rival males. If these displays fail, the males may resort into physical combat until there is a victor. Females are oviparous, with clutch sizes ranging from 6-13 eggs laid under several inches of loose soil or hidden within rotting wood. The gestation period (development time to time of hatching) is typically around 70 days, with sexual maturity reached within 2 years.



COLORING PAGE



Snakes in Winter

Where do snakes go in winter? In more northern states like Virginia, they often hibernate in groups in places called hibernacula (sing. hibernaculum). This activity is also called brumation, though the necessity for this term to differentiate ectotherms from endotherms is up for debate. For both groups, the body slows down and food is rarely, if ever, sought after. On warmer days, snakes may emerge for a drink or bask. For the best odds of survival, snakes seek shelter below the frostline. This includes wells, large rock piles, and stumps.



Plain-bellied Watersnake Bruce Grimes

Our Central (prev. Eastern) Ratsnake (Pantherophis alleghaniensis) was commonly called the "Pilot snake" because it was believed to pilot other snakes such as Timber Rattlesnakes (Crotalus horridus) and Eastern Copperheads (Agkistrodon contortrix) to hibernacula. Since then, we've learned that they aren't necessarily the leaders, but multiple species WILL overwinter in the same hibernaculum. While most snakes are fairly independent and not social, they can "get along" in groups under shelter and during winter. In Virginia, you can sometimes find snakes outside at 40°F, sometimes even lower! Snakes in the Natricinae subfamily like gartersnakes, watersnakes, and brownsnakes are usually the ones spotted at these temperatures. Usually they're found under cover like stones and logs. They're also the first snakes to typically be seen emerging in spring. Online identification groups and the VHS identified email typically get flooded with Dekay's Brownsnake observations in spring!

Northern Cottonmouth

♥ "You might see snakes out and about as low as 40°F!" ₩



BY YONA BRITTO, VHS NEWSLETTER EDITOR

Photo Contest Winners!









Snake Identification and Snakebite Treatment

VHS member Larry Mendoza educates medical students on venomous snake identification and snake bite treatment alongside emergency physician Dr. Ty Stannard.

Medical students both national and international gathered at "Wilderness Adventures at Eagles Landing" in New Castle Virginia as part of a month long retreat. The retreat was part of the Carilion Clinic's Wilderness Medicine fellowship which gives interested medical students knowledge specific to emergency medicine as it applies to being out in the great outdoors.

Larry brought some of his snakes, both venomous and non-venomous to discuss how to show the medical students up close how to identify the difference between venomous and non venomous species in the US. Dr. Ty Stannard kicked off this session by discussing emergency snake bite treatment and the dos and don'ts when treating snake bite victims.





Larry Mendoza with a "tubed" Eastern Copperhead



The session was very well received and Larry has already been invited for next year's program! For information on the VHS Educational Program, or to book a talk, contact the <u>VHS Education Committee Chair</u>.

BY LARRY MENDOZA, VHS REGULATORY AFFAIRS COMMITTEE

ART FEATURE



For a chance to have your art featured in the next newsletter, submit photos (with permission for use) to <u>newsletter@vaherpsociety.com</u>!

Adventures in Herp Education

"How can I keep snakes out of my house?" "A big turtle laid her eggs in my yard. How can I protect them?"

"We would like to invite the VHS to have an exhibit at our environmental festival."

"What kind of salamander has a blue tail?"

"Can you send someone to get rid of moccasins in our pond?"

"Our Master Naturalist Chapter needs a herpetology instructor to train new members." "Can you do a snake show for our cub scout pack?" "Help! Our 10-year old wants to become a herpetologist."

Since its founding in 1958, education has been a priority of the Virginia Herpetological Society. In the early days, our educational efforts focused on school teachers and scout leaders. As the samples above show, public herp education today can take on many forms and reach a diversity of audiences. The following paragraphs provide more details about many of our Society's educational efforts.

The VHS Website and the Facebook page are visited by thousands of Virginians and others who seek info about our native herpetofauna. How do you identify these critters, where do they live, how big do they get, what do they eat, which ones are dangerous? The animal pages are full of answers. In addition, the website's education department contains pages covering Educational Materials, Kids and Herpetology, Virginia Herp Regulations, and more information for people of all ages. John White has done a fantastic job in managing these educational sites.



Our animal identification email service has handled many thousands of requests over the years. Folks typically send photo(s) with associated data and questions to us at: animalidentification Quincipiche

identification@virginiahe rpetologicalsociety.com.

Our replies typically state the correct common name of the animal in question, provide a link to it on our website, and often add some other pertinent natural history information. Not only are we providing a needed service for the public, but sometimes the public provides us with unique photos or new county locality records. For example, in 2015 we received cottonmouth photos and data from three separate individuals in Brunswick County near Lake Gaston. Not only did these prove to be county records but they showed that this species had at least a limited presence in the southern Piedmont of Virginia, not just the Coastal Plain.





BY MIKE CLIFFORD, VHS EDUCATION COMMITTEE

Adventures in Herp Education

In 2005, the Virginia Master Naturalists program was born and we gained a new audience and a new partner. Our VHS instructors provide basic and advanced herpetological training and then in turn the VMN members help spread knowledge of reptiles and amphibians to the public. Personally, every year I teach the basic herp classes for the Pocahontas and the Central Piedmont VMN Chapters. I've also provided herp education programs for VMN's sister organization, the Virginia Master Gardeners. Recently, in partnership with the Virginia Department of Wildlife Resources, we were able to offer free copies of the late Joe Mitchell's book The Reptiles of Virginia to every VMN chapter.

Environmental Festivals abound across Virginia. VHS participates in many of them with quality exhibits, herp society personnel, and often, live specimens. Larry Mendoza is king of these tabling events which typically draw large crowds. We also get many requests for presentations at smaller events. I remember doing a herp presentation for a regional garden club held at the beautiful Mountain Cove Vineyard in Nelson County. As a travel stipend, the club presented me with a couple bottles of their finest vintage! Over the past 64 years, VHS members have provided herp presentations to hundreds of school groups, 4-H and scout organizations, youth camps, and local libraries. In particular, Susan Watson, a Virginia DWR biologist and VHS executive council member has done a tremendous number of these presentations as can be seen in our annual VHS education reports.

The largest live audience that I have ever faced was at a state pest control operators' conference held at Virginia Tech years ago. The auditorium held an audience of hundreds for the snake identification presentation. Several of us have provided training for other animal and pest control groups around the state. Mark Khosravi provides on-line instruction for the National Wildlife Control Operators Association.

Face-to-face interaction with folks can also be quite educational as well. I remember getting an emergency phone call one morning from a distraught lady who was surprised by a curious ratsnake while sitting in her bathroom. She slammed the door on her way out. She begged me to come and remove the snake. When I got there, the snake was still on her windowsill. She had left in a BIG hurry. Another elderly lady in our county lived in an old run-down, rodent-infested, rental house. She called several times over the summer, asking me to remove ratsnakes from inside her house, which I did. I told her that she really needed these snakes, but to no avail. The last snake that I rescued there was a 36" ratsnake. It was wrapped around a huge but very dead Brown Rat on her living room floor. The little snake had no hope of swallowing such a rodent.

After many years, I am retiring from my role as chairman of the VHS Education Committee. I really appreciate all of the educational work performed by so many VHS members over the years. You have made a genuine difference. For more about herp education in Virginia, see the annual reports posted in the Education Department on the VHS website. While you are there, you might also want to read "Six Decades of Herpetological Education".





BY MIKE CLIFFORD, VHS EDUCATION COMMITTEE

Survey at Brownsville Preserve May 22, 2021

Submitted by Erin Anthony, VHS President

A total of eleven species were observed during the May 22nd survey of Brownsville preserve in Nassawadox, Virginia in 2021. Three amphibian species – all anurans – were recorded with the two Lithobates species found in fresh water bodies and the Fowler's toad found along the gravel roads. Eight reptilian species were recorded, and their diversity of microhabitats reflected the diversity of species themselves. The two lizard species were uncovered under logs and in the surrounding pine dominated forests. The turtles were primarily found in fresh water with the exception of the Northern Diamondback Terrapins which were observed swimming in the brackish water behind Brownsville Manor and a Southeastern Mud Turtle crossing the gravel road. The three snakes observed were near the road, but only the Northern Watersnake was near a waterbody. There were two individuals found dead, but none of the live specimens had injuries. The shell of a deceased Southeastern Mud Turtle was in the shallows of the freshwater marsh within the pine forests. A dead on road (DOR) Northern Rough Greensnake was on the gravel parking lot in front of the Nature Conservancy's main office.



Species	Common Name	Individual Count	Microhabitat
Anaxyrus fowleri	Fowler's Toad	7	All seven individuals found on gravel roads and in the tall grass next to roads
Chelydra serpentina	Snapping Turtle	1	Found in fresh water and buried itself in mud after release
Kinosternon subrubrum subrubrum	Southeastern Mud Turtle	2	On road, shell found next to fresh water
Lithobates catesbeianus	American Bullfrog	1	In fresh water
Lithobates sphenocephalus utricularius	Coastal Plains Leopard Frog	1	In fresh water
Malaclemys terrapin terrapin	Northern Diamond- back Terrapin	4	In brackish water
Nerodia sipedon sipedon	Northern Watersnake	1	Next to road by fresh water
Opheodrys aestivus aestivus	Northern Rough Greensnake	1	DOR next to main office
Pantherophis alleghaniensis	Eastern Ratsnake	1	In grass next to road
Plestiodon fasciatus	Common Five-lined Skink	1	Under log
Scincella lateralis	Little Brown Skink	3	Under bark in pine woods, among leaf litter

Survey at Prince William Forest Park May 8, 2021

Submitted by Paul Sattler, VHS Journal Editor

Snakes	
Carphophis a. amoenus	54
Coluber c. constrictor	4
Diadophis p. edwardsii	16
Nerodia s. sipedon	2
Pantherophis alleghaniensis	2
Storeria occipitomaculata	1
Storeria dekayi	2
Total Snakes	81

Turtles	
Chelydra serpentina	1
Chrysemys picta	2
Sternotherus odoratus	1
Terrapene c. carolina	3
Total Turtles	7

Lizards	
Plestiodon fasciatus	11
Sceloporus undulatus	2
Total Lizards	13



Frogs and Toads	
Acris crepitans	>30
Anaxyrus a. americanus	2
Anaxyrus fowleri	1
Lithobates catesbeianus	2
Lithobates clamitans	16
Lithobates palustris	4
Lithobates sylvaticus	>1
Total Frogs and Toads	>56

Salamanders	
Ambystoma maculatum	>10
Ambystoma opacum	>10
Eurycea bislineata	1
Notophthalmus v. viridescens	>34
Plethodon cinereus	47
Plethodon cylindraceus	6
Pseudotriton r. ruber	2
Total Salamanders	>110

Survey at Mattaponi Wildlife Management Area June 11-13, 2021

Submitted by Paul Sattler, VHS Journal Editor

Species	1	2	2A	2B	3	4	4A	4B	5
Amphibians									
Acris crepitans	20	10, C	с	с	16	7,C			
Ambystoma opacum	1				1				
Anaxyrus fowleri	3	4			1	1	8		1
Gastrophryne carolinensis					1		2,C		
Hyla chrysoscelis		E	с	с	3,E	С	с	с	с
Hyla cinerea			с	9,C			с	с	
Lithobates catesbeianus		1,C	С	1,C		с			
Lithobates clamitans	1	8,C	с	2	3	С	2,C	с	
Lithobates sphenocephalus utricularius				1			1		
Lithobates virgatipes		С	с	с	1,2T	1,C	с	с	
Notophthalmus v. viridescens	3				4				
Plethodon cylindraceus					1				
Pseudacris crucifer					4				
Scaphiopus holbrookii				1					

C = calling males observed, E = fresh eggs observed, T = tadpoles



Survey at Mattaponi Wildlife Management Area (continued) June 11-13, 2021

Submitted by Paul Sattler, VHS Journal Editor

Species	1	2	2A	2B	3	4	4A	4B	5
Reptiles									
Aspidoscelis s. sexlineata									23
Carphophis a. amoenus	2				3				
Chelydra serpentina				1		2			
Chrysemys p. picta						3			
Kinosternon s. subrubrum					1				
Pantherophis alleghaniensis	1								
Plestiodon fasciatus	1	1				1			
Sceloporus undulatus						1			1
Terrapene c. carolina	1				1				
Virginia v. valeriae	1								
Total Number of Animals	34	24		15	42	16	13		25

C = calling males observed, E = fresh eggs observed, T = tadpoles

Carphophis a. amoenus means "straw-snake" and "charming". These little snakes are very docile.



Herp Quiz

1. Which of these is viviparous?

- a. Eastern Gartersnake
- b. Northern Black Racer
- c. Southeastern Crowned Snake
- d. Red Cornsnake

2. Which is NOT native to Virginia?

- a. Timber Rattlesnake
- b. Eastern Coralsnake
- c. Eastern Copperhead
- d. Northern Cottonmouth

3. Which of these is found in 93 of 95 VA counties?

- a. Wood Frog
- b. Northern Watersnake
- c. Eastern Six-lined Racerunner
- d. Eastern Kingsnake

4. Which of these is in the Eurycea genus?

- a. Long-tailed Salamander
- b. Red-backed Salamander
- c. Eastern Spadefoot Toad
- d. Woodland Box Turtle

5. Which of these is NOT known to constrict its prey?

- a. Lampropeltis triangulum
- b. Pantherophis alleghaniensis
- c. Coluber constrictor constrictor
- d. Pantherophis guttatus

6. Which of these genera has the most species in VA?

- a. Heterodon
- b. Terrapene
- c. Lithobates
- d. Plethodon

7. How many cities has the Green Anole been documented in?

- a. 7
- b. 10
- с. б
- d. 2
- 8. Which of these has weakly keeled scales? a. Eastern Ratsnake
 - b. Plain-bellied Watersnake
 - c. Eastern Glossy Swampsnake
 - d. Eastern Hognose
- 9. Which of these is oviparous?
 - a. Northern Watersnake
 - b. Brown Watersnake
 - c. Southeastern Crowned Snake
 - d. Common Ribbonsnake







Can you identify these herps?

You can learn the answers to these questions and more on our website! <u>vaherpsociety.com</u>

Answers on page 18!

VIRGINIA HERPETOLOGICAL SOCIETY • VOL. 32 WINTER 2022

PAGE 16

Crossword





ACROSS

- 2. Frog name that includes the name of a mammal.
- 3. Endangered turtle.
- 5. Only lizard in Virginia in the Sceloporus genus.
- 6. Old vernacular name for Ratsnakes.
- 9. Both species and subspecies mean "long tail."
- 10. Trail of the bear salamander.

DOWN

- 1. Salamander genus with the highest number of species in VA.
- 4. Official state salamander.
- 7. The subspecies of box turtle found in the state.
- 8. Snake with a food in its name.

Answers on page 18!



PAGE 17

Snake Infographics

Feel free to share these graphics to help quell the rampant misinformation out there on snakes. Remember, as long as you give snakes space, they're not a danger to you.







Quiz answers: 1.a. 2.b. 3.b. 4.c. 6.d. 7.d. 8.a. 9.c. A.Northern Ringneck B. Northern Cottonnouth C.Wood Turtle

Crossword answers: 1. Plethodon 2. Bulltrog 3. Wood 4. Northern Red Salamander 5. Fence Lizard 6. Pilotsnake 7. Woodland 8. Cornsnake 9. Longicauda 10. Yonahlossee

PAGE 18