# Virginia Herpetological Society Vol. 28 No. 1 April 2018



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### A Note from the Editor ....

Hello! I'm Bonnie Keller, the newest editor for the VHS Newsletter. When I volunteered to take over from Susan, I was excited to be able to help the VHS this way. Unfortunately, it seems that I didn't do it justice this time, and for that, I apologize. I hope this newsletter is informative, if not as robust as past issues. Next time I will be more prepared and have a better idea of how much time and effort it will take to create this newsletter. And, it will come out sooner so you have more time to plan to attend all the events and surveys.

In the meantime, if you have photos from any of our surveys, or just photos of wild natives, feel free to send them to me! newsletter@vaherpsociety.com

Sincerely,

Bonnie Keller Newsletter Editor Virginia Herpetological Society Follow Us On: Facebook / Google+



#### 2018 Meeting and Survey of the Virginia Herpetological Society

#### Lake Anna State Park

This is the first herpetological survey conducted by the Virginia Herpetological Society (VHS) in Spotsylvania County, Virginia. Lake Anna State Park is over 3,000 acres with a variety of habitats to target different herp species. There a few county records that are to be expected at this survey. Learn more about Lake Anna State Park.

When

- Friday, May 18 Business Meeting and Survey Coordination (6:30 pm 9:00 pm)
- Saturday, May 19 Main Survey (8:00 am 3:00 pm) Night Survey (8:00 pm 9:30 pm)
- Sunday, May 20 Secondary Survey, VHS Members only (8:00 am to 12:00 pm)

Where

- Lake Anna State Park 6800 Lawyers Rd., Spotsylvania, VA 22551
- Google Maps Location
- Park Map
- Trail Guide

#### Signing up

All participants must register here.

You must be a member to sign up for Sunday's survey. Become a member here.

Schedule

Friday, May 18th: 6:30 pm - 9:00 pm

Business Meeting - Visitor Center (Location of Visitor Center)

Starts at 6:30pm. We will be talking about VHS business items and around 7:30 pm we will talk about the upcoming survey. We will go over different areas of the park that we will survey, choose group leaders, and talk about what species we hope to encounter as well as what we expect to see.

Saturday, May 19th: 8:00 am - 3:00 pm

Meet at Visitor Center, talk about what we hope to find, divvy up groups, disinfect footwear and equipment Night Hike: 8:00 pm - 9:30 pm Location: TBD

Sunday, May 20th: 8:00 am - 12:00 pm \*\* Members only \*\* Location: TBD

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#### Lodging

As of March 20th, all cabins and campsites are reserved, but you can check for cancellations at Lake Anna State Park by calling 1-800-933-7275 or <u>book online;</u>

Find other nearby lodging <u>here</u>. Most rooms are going to be about 20 miles away in Fredericksburg.

\*\* This survey is the weekend before Memorial Day which will be very busy, so book your accommodations ahead of time! More information will be added as it becomes available.

If you have any questions please contact Matt Neff, President of VHS: president@vaherpsociety.com

#### Virginia Herpetological Society 2017 Email & Facebook Identification Results

During 2017 the Virginia Herpetological Society Identification Group identified 456 native amphibians and reptiles. These identifications included 67 frogs and toads, 43 salamanders, 16 lizards, 279 snakes and 51 turtles. Excluded from this list are out-of-state (and country) identification requests.

Out of the 279 snake identification requests received, 247 were harmless species and 32 were venomous. Venomous snake identifications included 4 Eastern Cottonmouths, 22 Northern Copperheads and 6 Timber Rattlesnakes. Identification requests for Eastern Cottonmouths spiked in June, for Northern Copperheads the spike was in September and reports for Timber Rattlesnakes spiked in July.



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# 2017 Survey Summaries

#### Mole Hill Survey

The VHS conducted a survey at Mole Hill in Rockingham County, VA on Mother's Day, Sunday, May 14, 2017. There were 13 participants (one of which was a herp-enthusiast mom) in attendance and 139 individuals of 3 species of herpetofauna were documented: 1 Northern Ring-necked Snake, 2 Eastern Gartersnakes, and 136 Red-backed Salamanders.

Mole Hill is an interesting place to hold a herpetological survey because it's on top of a volcano! This site has been used as a study site for geologists at James Madison University, but has never been surveyed for herpetofauna before. Mole Hill is comprised of volcanic rock called basalt which is unusual for the area around nearby Harrisonburg which is comprised of limestone. Basalt can also be found in the Shenandoah and Blue Ridge Mountains not too far away in Virginia. Mole Hill is owned by <u>Mole Hill Bikes</u> and VHS would like to extend a big thanks to them for allowing us to partake in our herp survey on their property.

Rockingham County has been surveyed by Harry G. M. Jopson of VHS who surveyed the county extensively between 1936-1984.



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#### Newport News Bioblitz



On May 19-21, 2017, 41 volunteers participated in the Newport News Park BioBlitz. At the conclusion of the event the survey teams found 36 species and observed over 393 animals. Herpers who love amphibians were treated to 16 species of anurans and salamanders. The highlight being Ambystoma mabeei (Mabee's Salamander) and Amphiuma means (Two-toed Amphiuma).

Reptile lovers were not disappointed either. We found 20 species of reptiles. The highlight for snake lovers was observing 6 Agkistrodon piscivorus (Eastern Cottonmouths) and two mating Lampropeltis getula (Eastern Kingsnakes). John White also found an albino Carphophis a. amoenus (Eastern Wormsnake). The VHS would like to thank everyone who came out and made this such a meaningful survey. We also appreciate all the time and effort Kory and Emily Steele and others put into organizing this event. Some pictures are shown, but more are shown on our Facebook page!



#### Hidden Valley WMA



Ratsnake were found dead on the road. We found eleven species of salamanders, with over 375 individuals. This high elevation site enjoys cool temperatures where salamanders rather than reptiles thrive. There were large numbers of Alleghany Mountain Dusky and Gray-cheeked Salamanders. We also found impressive numbers of Red-backed and Slimy Salamanders. The highlight of the survey was a night hike along cliffs where Green Salamanders were observed. For those who enjoy salamanders, the southwestern corner of Virginia is one area that can't be missed! 12th Annual HerpBlitz Summary

June 10th - 11th

Hidden Valley Wildlife Management Area

The survey of Hidden Valley Wildlife Management Area was in the far southwestern portion of Virginia, in Washington County. Seven volunteers over three days found 400 amphibians and reptiles, the vast majority being salamanders. We saw one Pickerel Frog, and heard Spring Peepers, Green Frogs and a Bullfrog. We saw Northern Watersnakes, a Ring-necked Snake, and a Milk Snake. A Gartersnake and an Eastern



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## Herp Trivia

- 1. Which of these families includes ratsnakes, kingsnakes (and others)?
  - a. Viperidae
  - b. Boidae
  - c. Elapidae
  - d. Colubridae
- 2. Caimans belong to which of these groups?
  - a. Crocodiles
  - b. Geckos
  - c. Vipers
  - d. Alligators
- 3. Which of these is the natural prey for North American Hognose snakes?
  - a. mice
  - b. fish
  - c. toads
  - d. other snakes
- 4. Which of these has the longest tongue, compared to its body length?
  - a. blue tongued skink
  - b. Chinese Water dragon
  - c. Veiled Chameleon
  - d. American Bullfrog
- 5. Which of these North American venomous snakes is in the same family as Cobras?
  - a. Copperheads
  - b. Coral Snake
  - c. Rattlesnake
  - d. Water moccasin
- 6. Which species of salamander was recently designated as Virginia's State Salamander?
  - a. Eastern Hellbender
  - b. Shenandoah Salamander
  - c. Mudpuppy
  - d. Red Salamander
- 7. Frogs always lay their eggs in water. Where do toads lay their eggs? \_\_\_\_\_
- 8. Which evolved first: lizards or snakes?

9. Which of these is NOT a type of lizard?









- 10. What country has the highest number of deadly venomous snakes?
  - a. Mexico
  - b. Brazil
  - c. Australia
  - d. India
  - e. Indonesia

Answers are on page 13!

c.

d.

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# News



#### Official Salamander!

In the Slippery News Department: The Virginia General Assembly has passed a bill that makes the "Red Salamander" the official state salamander. Unfortunately, the bill only gives a scientific name down to species level, and not the subspecies. Hence the reason "Red Salamander" is in quotes. Regardless, it's great that Virginia has recognized this widespread species. The Northern Red salamander is the featured animal at the top of this newsletter. The Blue Ridge Red Salamander is shown at left. (Both photos from the VHS website.)

A 4-H Club from Fairfax (shown at right) is responsible for the 3-year long effort. Larry Mendoza, (second from the right), is a former VHS president and Regulatory Affairs Committee Chair, and assisted in recent months by attending Senate committee hearings and meeting with the bill's sponsor. J.D. Kleopfer (far right) from VDGIF also assisted in providing technical information at the hearings. Del. Eileen Filler-Corn sponsored the bill, and is 3rd from the left in this photo.



You may recall that Virginia gained a new

state snake last year, the Eastern Garter Snake. That makes Virginia one of the only states with TWO state-recognized herpetofauna!! Many years ago, a push to make the Woodland Box Turtle the state reptile failed - perhaps now is the time for someone to try again?

For more info about these and other salamanders in Virginia, see <u>here</u>.

#### Links about this story:

- <u>Virginia's Next Icon</u>
- Salamander-wriggling-its-way-into-state-law
- Link to the Code of Virginia, law that lists official emblems & designations

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## Upcoming Surveys and Events

#### Longwood University-2018 BioBlitz

The Department of Biological and Environmental Sciences of Longwood University (Longwood) will host their annual BioBlitz on Saturday April 21 from 9AM-12 PM at Lancer Park (athletic fields) in Farmville, VA. Dr. Sujan Henkanaththe Gedara will coordinate the overall event.

The area to be surveyed includes eastern deciduous and mixed forests, wetlands and bottomland near the confluence of Buffalo Creek and the Appomattox River and lots of prime habitat for amphibians and reptiles. In the past the Longwood BioBlitz has drawn well over 100 participants but only a handful of surveyors with an interest in amphibians and reptiles. Longwood hopes to boost herp participation this year. David Perry, VHS Secretary, will coordinate the herpetological survey and identification efforts.

If you plan to attend the 2018 Longwood BioBlitz, please complete the <u>registration form</u> and plan to meet at Biological and Environmental Sciences Lab at the far end of Lancer Park on Cormier Drive at approximately 8:30 AM. Please come prepared for a harsh environment with boots, Insect and tick repellant and plenty of water. Cormier Drive intersects with U.S. Rte 15 Business (East Third Street). U.S. Rte 15 Business can be accessed from the north via U.S. Rte 15 or from the south via U.S. Rte 460.

#### Surveys (two) of Ware Creek WMA, Sunday April 29th & Sunday May 6th

The VHS Conservation Committee is planning to survey Ware Creek Wildlife Management Area (WCWMA) on Sunday April 29 and Sunday May 6 from 8:30 AM to 3:30 PM (Sunday dates are necessary to avoid potential safety conflicts with the spring turkey hunting season). WCWMA is located on the York River in the community of Barhamsville near Williamsburg in New Kent County. WCWMA contains more than 2600 acres of mixed hardwood and pine forest, extensive wetlands and open fields. WCWMA has not previously been surveyed by VHS. It is of interest to the Conservative Committee as 13 amphibian and reptile species with VDGIF tiered conservation status have been documented for New Kent County, several of which might be present in WCWMA.

These surveys are VHS members-only events, with each member entitled to invite one additional guest participant. Participants can attend on either or both survey dates. If you plan to attend please provide your (and your guest) contact details on the <u>registration form</u> that follows for the date(s) you plan to attend.

For the surveys, please come prepared for a harsh woodland and wetland environment. Suitable boots (waterproof if possible), insect and tick repellant, lunch or snacks and plenty of water are strongly recommended.

Directions: Take I-64 to Exit 227 VA-30 Toano/Williamsburg. Turn left (if traveling from Richmond) or right (if traveling from Newport News) onto Old Stage Road (VA-30). After 1.5 miles turn right onto Holly Forks Road, which becomes Tabernacle Road after 0.9 miles. Continue on Tabernacle Road for 1.9 miles and turn left onto Triangle Road. After 0.5 miles turn right onto Holly Fork Rd and proceed 0.3 miles to Millers Road. Turn left on Millers Road and continue 0.4 miles to the management area Map of Ware Creek WMA

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## Native Herp Highlight: The Eastern Hognose Snake

Few animals in the world can put on an act quite as convincingly as the hognose snake. Here in the Virginia, our local reptile thespian is the Eastern Hognose. This little snake puts on quite the show, channeling the cobra and the American Opossum as they first pretend to be fierce before "dying" in a dramatic, extended "death."



Notice that there are many colors

and patterns for this species, but ALL exhibit the upturned snout and have the same general body shape. The nose is the easiest way to ID this species for those unfamiliar with VA native snakes.

Common Name:	Eastern Hog-nosed Snake
Scientific Name:	Heterodon platirhinos
Vernacular Names:	Adder, bastard rattlesnake, black adder, black blowing viper, black hog-nosed snake, black viper snake, blauser, blower, blowing adder, blowing snake, blowing viper, buckwheat-nose snake, calico snake, checkered adder, chuck head, common spreading adder, deaf adder, flat-head, flat-headed adder, hissing snake, hissing viper, mountain
	moccasin, poison viper, puff adder, red snake, rock adder, sand adder, sand viper, spotted viper, spread-head moccasin, spread-head snake, spread-head viper.
Etymology Genus:	<i>Heterodon</i> is derived from the Greek words <i>heteros</i> meaning "different" and <i>odon</i> meaning "tooth".
Species:	<i>platirhinos</i> is derived from the Greek words <i>platys</i> meaning "broad or flat" and <i>rhinos</i> meaning "snout".
Average Length:	20 - 33 in. (51 - 84 cm)
Record length:	44.5 in. (113 cm) in VA; 45.5 in. (115.6 cm) species record

Video of the defensive behaviors.

Video of the theatrical and defensive behaviors.

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### Save Our Scales!

Looking to adopt a pet reptile? Know of one that needs rehoming? Reptile rescues are often the best place to help with those issues. See the known, reputable rescues below:

**Blue Ridge Reptile Rescue** is a fairly new rescue in VA, about 3 years old. They are located near Lexington. <u>https://www.blueridgereptilerescue.org/</u>

Some of the animals currently up for adoption:



Survey

Survey is an adult male leopard gecko. He came to us suffering from anorexia and dehydration, but is much better now! He has a beautiful, fat tail and gorgeous eyes.



Crowley is a gorgeous adult iguana. He is about four years old, and very full of himself. He loves to climb as high as he can! He also enjoys basking on window ledges and watching the wildlife outside. Crowley would do best in a home that can provide him with a large enclosure and plenty of time to roam and explore.

**VA Reptile Rescue** has closed their shelter, but are still available to help assist with finding new homes, removing unwanted snakes, etc. Contact <u>Bonnie Keller</u> for adoption information. VA Reptile Rescue will continue to be available to help with any other reptile issues that we can!

Despite the shelter being closed, we still have THREE animals for adoption that we've agreed to take in over the last several months. We have an adult female Ball Python and two adult Bearded Dragons - 1 male, 1 female. They need homes! <u>www.vareptilerescue.org</u>

Virginia Reptile Expos 2018

	Dates	Admission Fee	Time	Location
<u>Northern VA Reptile</u> <u>Expo</u>	4/14, 6/23, 8/25, 10/13, & 12/8	\$8 / \$3 child	9 am to 3 pm	Prince William County Fairgrounds Dumfries Rd, Manassas, Virginia 20108
<b><u>Richmond Reptile Expo</u></b>	07/21 & 10/27	\$8 / \$3 child	9 am to 3 pm	Richmond International Raceway, Colonial Bldg, 602 E Laburnum Ave Richmond, VA 23322
<u>Repticon Norfolk</u>	9/15 & 9/16	\$12 (Adult) \$5 (Ages 5-12)	Saturday 10-5 Sunday 10-4	<b>Renaissance</b> <b>Portsmouth-Norfolk</b> 425 Water Street Portsmouth, VA 23704

PLEASE remember to research BEFORE your buy a new species. Just because you've kept other reptiles doesn't mean that you know how to keep ALL of them. There are numerous places online with caresheets and info about nearly every species. Learn what you have the time, space, and money for. Learn if the species is legal in your area. Learn if you have the experience to work with that species. If not, DON'T bring it home! The reptile rescues don't need more business.

Don't mind traveling to other locations for expos? There are many others - just search online!

### ANSWERS TO HERP TRIVIA:

1) d 2) a 3) c 4) c 5) b 6) d 7) in the water 8) lizards 9) b 10) a

## Setting up a turtle or tortoise pen outside - by Bonnie Keller

When I was operating VA Reptile Rescue, I often had people asking about how to set up an outdoor enclosure for their turtle or tortoise. They saw what I had done at the various places I had set up, and were intrigued. While I've usually just told them to Google it, I decided to start collecting links of places I thought did a pretty good job of showing what good turtle gardens look like. So, here are a few, in no particular order (yet). As I posted this, several of the links were invalid, so there are fewer than in my original webpage.

#### Aquatic turtles:

https://www.reptilesmagazine.com/Turtles-Tortoises/Turtle-Care/Build-the-Ultimate-Turtle-Pond/ http://www.fishpondinfo.com/turtles/turpond.htm Tortoises and Box turtles http://www.tortoisetrust.org/articles/habitatdesign.htm http://www.boxturtlesite.info/hou.html http://turtle tails.tripod.com/backyardturtles/backyardturtles.htm



supplemented with added items.

Do you have an outdoor turtle or tortoise garden? Send pics! newsletter@vaherpsociety.com



Here's one of my own box turtle pens, at left. YES, those are

worms. As long as they can get out, they do just fine.

Woodland (formerly Eastern) box turtles, and YES, they are swimming! They do guite well in shallow water, and will eagerly chase fish and

The picture below is another box turtle/tortoise habitat at a different house. A pond is off to the left, not visible. Wherever possible, I plant

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in the

They

food.



#### HELP SUPPORT THE VHS!

Throughout the year, please consider ways to help support VHS, when shopping! Also, don't forget to take advantage of one of the great benefits of being a VHS member; you can save a bit of the money you need for shopping when going on outings with family and friends this time of year to nearby zoos and similar facilities where VHS members get great discounts.



**AmazonSmile** is a simple and automatic way for you to support your favorite charitable organization every smile time you shop, at no cost to you.

Please use the following link to set up Smile donations on your Amazon account, and remember to shop using smile.amazon.com or install a plugin like Smile Always to redirect your browser each time you shop Amazon. VHS thanks you for your support!

#### https://smile.amazon.com/ch/27-0589536



Click here to go to VHS Cafe Press Store to find an assortment of high guality merchandise intended to celebrate the diversity of amphibians

and reptiles native to Virginia. This includes the new 2016 VHS Wall Calendar! Check it out at the following link:

http://www.cafepress.com/vaherpsociety.16573074 89

goodshop &<br/>goodsearchYou search &/or shop! They<br/>give, give, give!

**GoodSearch.com:** Use it as you would any search engine, get quality search results from Yahoo, and in return they'll donate up to half of advertising revenue to VHS!

**GoodShop.com** is an online shopping mall featuring hundreds of great stores including Amazon, Best Buy, Target, Macy's, and many more. GoodShop will donate up to 30 percent of each purchase to your favorite cause

The GoodSearch - Virginia --Herpetological Society (NEWPORT NEWS VA) toolbar will earn VHS money every time you shop and search online - even if you forget to go to GoodShop or GoodSearch first!

#### MEMBERS GET DISCOUNTS AT ZOOS!

Admission Discounts		Membership Discounts	
<u>Leesburg</u> Animal Park	\$2 off	<u>Virginia</u> Aquarium	25% off Crab, Otter, or Hedgehog
<u>Luray Zoo</u>	50% off entry		membership
<u>Mill</u> Mountain Zoo	\$1 off	Booking Discounts	
<u>Virginia</u> <u>Living</u> Museum	\$1 off	<u>Reptiles Alive!</u> LLC Northern	\$20 off any live animal show
<u>Virginia</u> Zoo	\$2 off	Virginia	

VHS is pleased to offer, as a membership benefit, discounts to select zoos and aquariums in Virginia. We hope that having an admission or membership discount will give you incentive to visit these facilities and give them your business. Although a dollar or two off of the price of admission does not sound like much, most zoos, aguariums, and museums are expensive to maintain, so it does represent a generous offer by the participating facilities. In order to facilitate these discounts, a VHS member must have proof of a current membership. We e-mail membership cards in PDF format. Please have these cards handy when visiting. Click here for more info.

#### MFMBFRSHIP!

Of course, the second reminder should remind us all to start or renew our VHS membership! If you need to start or renew your membership, please click here.

## Zoo and Educational Programming Info



<u>Reptiles Alive LLC</u> has been presenting educational, fun, and safe live animal shows since 1996. They are one of the DC metro area's most experienced and trustworthy live animal outreach education organizations. The staff are experts in delighting audiences of all ages and handling live animals safely in public settings. They are the only live animal show company in the DC area employing professional wildlife educators covered by Workers Compensation insurance. No "independent contractors" perform their programs.

Always check for the many upcoming public events at the following link: <u>http://www.reptilesalive.com/publicevents/publicevents.htm</u>



World of Reptiles, opening Summer 2018 is the slithering, creeping, crawling and curious adventure you've been waiting for. Come face to face with reptile giants, watch hatching and newborn



reptiles being nurtured and raised and immerse yourself in a floor to ceiling marsh habitat of the Siamese crocodile.

This state-of-the-art overhaul of the Virginia Zoo's reptile building is full of "Defining Moment" opportunities for children and adults alike.

We invite you to support, follow and share this project that is sure to delight visitors and inhabitants, and provide the next frontier of learning and stewardship for this spectacular collection of animals.

The Virginia Zoo is located in Norfolk, VA.

## Virginia Literature

These selections represent some of the articles and books published from mid-2016 to early 2018. Included articles are focused on (1) studies performed within Virginia, (2) studies on reptiles or amphibians native to Virginia, or (3) additional herpetological topics that are of general interest. This is not a comprehensive list of all literature relating to Virginia reptiles and/or amphibians. Compiled by Bonnie Keller, using searches with Google Scholar and other searching tools. And, in case you missed it, a thorough listing of Virginia Herpetological Literature was published last year (Jan 2017) by Dr. Joseph Mitchell. You can <u>find it here</u>.

#### Characteristics of a snake community in northern Virginia, USA.

CH ERNST, TR CREQUE, JM ORR... - Herpetological ..., 2016 - search.ebscohost.com Abstract The population characteristics of a community consisting of 16 species of snakes occurring in five microhabitats were studied for 24 years (1982 to 2006) at the Mason Neck National Wildlife Refuge, Fairfax County, **Virginia**, USA. The portion of the refuge studied ...

#### **[BOOK]** The **Snake** and the Salamander: Reptiles and Amphibians from Maine to **Virginia** AR Breisch - 2017 - books.google.com

In the best tradition of natural history writing and art, The **Snake** and the Salamander explores the diverse collection of reptiles and amphibians that inhabit the northeastern quadrant of the United States. Covering 13 states that run from Maine to **Virginia**, author ...

#### [PDF] Characterization and Significance of Sexual Dimorphism in Gape Size in Virginia valeriae ssp with Comparisons to V. striatula

GR Pisani - pdfs.semanticscholar.org

... The potential influence of drought on **Virginia** and other **snake** genera through the eastern USA is discussed ... Characterization and significance of sexually dimorphic gape in Rough Earth **Snake Virginia** striatula. Transactions of the Kansas Academy of Science 117(3-4), 2014 ...

#### Snake fungal disease: an emerging threat to wild snakes

JM Lorch, S Knowles, JS Lankton... - Phil. Trans. R ..., 2016 - rstb.royalsocietypublishing.org

#### [PDF] Contact-Independent Antagonism of Ophidiomyces ophiodiicola, the Causative Agent of **Snake** Fungal Disease by Rhodococcus rhodochrous DAP 96253 and ...

CT Cornelison, B Cherney, <u>KT Gabriel</u>... - J Vet Sci ..., 2016 - researchgate.net ... with a fungal dermatitis has been reported [1]. Cases have been confirmed in Florida, Georgia,

Illinois, Massachusetts, Michigan, Minnesota, New Jersey, New York, Ohio, Tennessee, Wisconsin, and **Virginia** [1,2]. This disease is commonly known as **snake** fungal disease (SFD ...

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## Diet and Foraging Behaviors of Timber Rattlesnakes, Crotalus horridus, in Eastern Virginia

SM Goetz, CE Petersen, RK Rose, JD Kleopfer... - Journal of ..., 2016 - BioOne

... Instances in which the **snake** was ambushing at the site of an object other than on a fallen log or at the base of a standing tree, such as a tree stump, were categorized as ... Fig. 2. Crotalus horridus ambush postures in **Virginia**; (A) non–log-oriented, (B) log-oriented, (C) vertical-tree ...

# Ancient, globally distributed lineage of Sarcocystis from sporocysts of the Eastern rat **snake** (Pantherophis alleghaniensis) and its relation to neurological sequalae in ...

<u>SK Verma</u>, DS Lindsay, <u>BM Rosenthal</u>, <u>JP Dubey</u> - Parasitology research, 2016 - Springer ... Bioassay of sporocysts collected from rat **snake** in interferon gamma gene knockout (KO) mice and Swiss Webster (SW) outbred mice ... examined the development of the parasite from KO mice in African green monkey kidney (CV-1) cells (ATCC CCL-70, Manassas, **Virginia**, USA ...

## Estimating freshwater turtle mortality rates and population declines following hook ingestion

<u>DA Steen</u>, <u>OJ Robinson</u> - Conservation Biology, 2017 - Wiley Online Library ... **Virginia**). Simulation Models. The mean  $\lambda$  for each of the nonhook-ingesting populations was >1 and ranged from 1.008 to 1.011 (Table 1). Ingesting hooks resulted in a mean  $\lambda$  < 1 for all but the **Virginia** snapping **turtle** population ...

#### [воок] <u>A comparative analysis of geometric morphometrics across two</u> <u>Pseudemys **turtle** species in east central **Virginia**</u>

#### KC Dillard - 2017 - search.proquest.com

Abstract The phylogeny of the **turtle** genus Pseudemys is poorly understood. In **Virginia**, many turtles have been found with indicator traits of both eastern river cooters (Pseudemys concinna concinna) and northern red bellied cooters (Pseudemys rubriventris). This study ...

## Hibernacula Site Selection of the Eastern Box **Turtle**, Terrapene c. carolina, in a West **Virginia** Population

#### BO Koester - 2016 - mds.marshall.edu

Abstract Eastern Box Turtles (Terrapene c. carolina) are a terrestrially hibernating reptile found throughout the eastern United States. Despite their prevalence, little, outside of anecdotal observations, is known about their hibernacula selection. This study examines if ...

#### Integrating Empirical Data and Ocean Drift Models to Better Understand Sea Turtle Strandings in Virginia

#### BS Santos - 2017 - publish.wm.edu

Abstract Hundreds of stranded turtles wash up deceased on **Virginia's** coastline each year, yet the causes of most stranding events are poorly understood. In this thesis, a carcass drift model was developed for the Chesapeake Bay, **Virginia**, to predict likely locations of ...

#### Wood Turtle Home Range and Habitat Use in the Central Appalachians

KRP McCoard, AA Billings, JT Anderson - Chelonian Conservation and ..., 2016 - BioOne
... In West Virginia, the wood turtle is listed as a vulnerable species (S3) and is a priority
1 Species in Greatest Need of Conservation in the Wildlife Conservation Action Plan
(West Virginia Division of Natural Resources [WVDNR] 2015) ...

#### <u>Movement, Seasonal Activity, and Home Range of an Isolated Population of</u> <u>*Glyptemys muhlenbergii*, Bog **Turtle**, in the Southern Appalachians</u>

LM Smith, RP Cherry - Southeastern naturalist, 2016 - BioOne ... Johns Hopkins University Press, Baltimore, MD. 840 pp. Google Scholar. Feaga, JB 2010. Wetland hydrology and soil as components of **Virginia** Bog **Turtle** (Glyptemys muhlenbergii) habitat. Ph.D. Dissertation. **Virginia** Polytechnic Institute and State University, Blacksburg, VA ...

#### [PDF] Freshwater Turtle use of Vomeronasal System While Foraging

#### S Coleman, SM Bartol - researchgate.net

... **Virginia** Wesleyan College ABSTRACT. Semi-aquatic **turtle** species such as the painted **turtle** (Chrysemys picta bellii) transit and forage in bodies of freshwater where water quality oftentimes impairs submerged visual acuity (Mason, 1992; Muñoz, 2004; Polo-Cavia et al., 2009) ...

## Pre-and post winter hibernation ecology of the eastern box turtle, Terrapene carolina carolina.

TP BOUCHER, CH ERNST... - Herpetological Bulletin, 2017 - search.ebscohost.com ... The focus of this study is to expand on current knowledge of the winter ecology and behaviour of Terrepene carolina carolina, the eastern box **turtle**, in northern **Virginia** during the cooler months of the year. MATERIALS AND METHODS ...

#### [PDF] The Etymology of Terrapin and Terrapene

CK DODD JR, K ADLER, R BOUR... - Herpetological ..., 2016 - researchgate.net ... after p. 134 and pp. 138–139, as terebin). Thus, it is likely that the word torope was incorporated into Eng- lish by early New World **Virginia** colonists to mean a **turtle**, or more specifically, a land **turtle**. Terrapin was used later by ...

Virginia Herpetological Society Volume 28, Issue 1, April 2018

# Investigating temporal changes and effects of elevation on the prevalence of a rickettsial blood parasite in red-backed salamanders (Plethodon cinereus) in **Virginia** ...

<u>AK Davis</u>, G Toledo, RL Richards - Comparative Clinical Pathology, 2016 - Springer ... 1 a Red-backed **salamander**, Plethodon cinereus, captured at the Mountain Lake Biological Station, in Giles Co., **Virginia**. Photograph by Pat Davis. b Photomicrograph of red-backed **salamander** red blood cells with inclusions of the rickettsial bacteria (arrows) ...

## [PDF] Validation of a stream and riparian habitat assessment protocol using stream salamanders in the southwest Virginia Coalfields

SE Sweeten, WM Ford - JASMR, 2016 - asmr.us

... (Table 3; Fig. 1A). Table 2. Model results for occupancy probabilities of FCI scores including the number of parameters in each model (K), Akaike's Information Criterion (AIC) rankings,  $\Delta$  AIC, and AIC weight ( $\omega$ i) for the four stream **salamander** groups, southwest **Virginia**, 2013 ...

#### [PDF] The Seasonal Prevalence and Impact of Emerging Infectious Diseases on Virginia Salamander Populations

C Twomey, L Wright - 2017 - digitalcommons.liberty.edu Abstract: In recent decades, amphibians have experienced unprecedented population declines, leading to many species extinctions worldwide1. A large number of these declines and extinctions are occurring in protected areas such as national parks and forests 5 ...

#### [PDF] An Erythristic Morph of Red-Backed **Salamander** (Plethodon cinereus) Collected in **Virginia**

TL Chapman, BG Gall... - **Virginia** Journal of ..., 2017 - digitalcommons.odu.edu Abstract Eight different color polymorphisms of the Red-backed **Salamander** (Plethodon cinereus) have been described throughout its range. Among them, the erythristic phenotype is a mimetic morph with coloration patterns similar to that of toxic Eastern Newt efts ...

#### Persistence of carry-over effects in the spotted salamander.

J Charbonnier, AH Stewart, K Grayson, <u>JR Vonesh</u> - 2016 - scholarscompass.vcu.edu ... Rice Rivers Center 2016 Persistence of carry-over effects in the spotted **salamander**. Julie Charbonnier **Virginia** Commonwealth University, charbonnierj@vcu.edu Ann H. Stewart Kristine Grayson University of Richmond, kgrayson@richmond.edu ...

#### Reproduction and growth of the Southern Leopard **Frog**, *Lithobates* sphenocephalus (Cope, 1886), in **Virginia**: implications for seasonal shifts in response to global ...

<u>DF Hughes</u>, <u>W Meshaka Jr</u>... - Basic and Applied ..., 2017 - ojs.herpetologica.org Abstract An examination of 750 museum specimens of the Southern Leopard **Frog** (Lithobates sphenocephalus) collected during 1938-1989 from eastern **Virginia** (USA) provided comparative life-history data from the northeastern portion of this species ...

#### Wood **Frog** and Spotted Salamander Abundance Across Pool Types and Wetland Networks at Fort AP Hill, VA

L McDonald, W Fields, K Horn, <u>JR Vonesh</u>, K Grayson - 2016 - scholarscompass.vcu.edu ... Rice Rivers Center 2016 Wood **Frog** and Spotted Salamander Abundance Across Pool Types and Wetland Networks at Fort AP Hill, VA Logan McDonald **Virginia** Commonwealth University, mcdonaldl3@mymail.vcu.edu Will Fields USGS Katelyn Horn University of Richmond ...

## Effects of roads and land use on **frog** distributions across spatial scales and regions in the Eastern and Central United States

DM Marsh, <u>BJ Cosentino</u>, KS Jones... - Diversity and ..., 2017 - Wiley Online Library ... Effects of roads and land use on **frog** distributions across spatial scales and regions in the Eastern and Central United States ... Mathematics, Science and Engineering Division, Northern **Virginia** Community College, Alexandria, VA, US

#### Last words for this issue....

As spring envelops us in warmth (hopefully) in the next few weeks, please keep an eye out for turtles crossing the roads! Remember to help them cross when it is safe to do so. Put them on the other side where they were trying to go, and wish them well. DO NOT MOVE THEM ELSEWHERE. Box turtles, in particular, MUST stay where they have established territories. Also, please do not "rescue" them and take them home. They need to remain in the wild to help populate the area.

The sign below has been shared to the VHS Facebook page. Please share it!!



I am a box turfle, a wild animal found throughout much of North America, with several species.

I am not a video game token; you do NOT get points for hitting me with your car or lawnmower.

I am not a pet. I need to remain outdoors to get proper diet and sunlight. Please don't "rescue" meyou are just kidnapping me.

If you find me on a road, please help me across. Don't take me somewhere else-I know where I am supposed to be and will try to get back. If I'm injured, please take me to a wildlife rehabilitator.

I am a box turtle. I can live over 100 years. Please leave me alone so I can stay free.