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John White

# VIRGINIA HERPETOLOGICAL SOCIETY

VOL. 24 NO. 2 FALL 2014

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Oct. 4, 2014

## FALL MEETING

Presentation Highlight: *Status of Snake Fungal Disease in Virginia; Preliminary Results from Southeastern Virginia.*,  
Amanda Guthrie, DVM, Virginia Zoo.

Got something to present? Contact Kory Steele at the address below.

- ☞ **Photo Contest:** A \$75 prize for 1st place, and \$25 prize for second place will be awarded to photos of Virginia native herps, without considerable photo alterations.
- ☞ **Auction:** Please feel free to donate quality herp/wildlife-related items for silent and live auctions. These auctions help defray the cost of the meeting. You never know what you'll see up for auction, so bring cash or your PayPal password!
- ☞ **Activities for Family Members not Attending:** Nature trails, playground, exhibits in the Nature Center and fishing are available onsite. Numerous attractions are available nearby within a 20 minute drive.
- ☞ **Food:** Lunch will be available onsite via Subway catering (vegetarian options available). You must register with us online and pay before lunch time to qualify. Join us for dinner after the meeting at Northside Grille.
- ☞ **Updates:** Be sure to check the [VHS website](#) and [Facebook page](#) frequently for any changes or updates.
- ☞ **Questions? Interested in giving a presentation?:** For more information, contact President Kory Steele: [president@vaherpsociety.com](mailto:president@vaherpsociety.com)
- ☞ **Park Website:** <http://henrico.us/rec/places/three-lakes/>

Research Presentations

Live Animals

Photo Contest

Silent Auction

Live Auction

Items for Sale

Live Animals

Business Meeting

Free Parking

Free Admission

Three Lakes Park &  
Nature Center  
400 Sausiluta Dr  
Richmond, VA 23227  
(804) 262-5055

9am – 6pm

# VHS Business

## VHS New Officers

Please welcome two newly appointed officers of VHS! One fills a vacancy in our Advisory Committee, while the other fills a newly created position.

*A Big Welcome* to one new face in the VHS Executive Committee goes to **Bonnie Keller!** Bonnie has been a VHS member off and on



**BONNIE KELLER**

since 2000 or so. She operates VA Reptile Rescue, Inc. with the help of her family and a few volunteers, and has taught high school and middle school science classes since 1993.

Currently living in

Prince William County, Bonnie has lived in nearly every region of the state and has been a fan of reptiles and amphibians since her childhood. From her first solo snake catch at age 8 or 9, she has been fascinated with these animals, and tries to pass on her appreciation for them via educational outreach programs and by having several reptiles and amphibians in her classroom.

*Another Big Welcome* to another new face in the VHS Executive Committee goes to **Joellen Welch**, who was appointed to the newly created VHS Newsletter Co-Editor! In this position, Joellen has graciously offered to perform much of the formatting of the final version of the revamped newsletter.

Joellen joined VHS this year as she found herself visiting the VHS website with increasing frequency, identifying neighborhood snakes in an effort to educate friends and neighbors and preserve local fauna. She is currently



**JOELLEN WELCH**

working as an image scientist and is inching towards a bachelor's degree in geographic information systems. She has redesigned documents and templates for many federal agencies and has also worked as committee chair for her neighborhood newsletter.

We look very forward to the service from our new officers!

## VHS Website Updates



If you haven't yet, check out the all new look of the [VHS website](#)! The Webmaster's hard work updating the look and functions of the website has paid off. For April 2014, the website had a record-breaking number of hits to the website: *4.99 million in just one month!*

Also, be sure to check out the VHS Webmaster's hard work in putting together summary pages for all the surveys that occurred this spring. This includes the most recent surveys at Belmead Plantation that already has a great [summary page](#), featuring an interesting pose by one of the great leaders of that survey, Dr. Paul Sattler, and the [Annual Survey summary](#) from James River State Park (some pictures on Page 9). Keep checking the [VHS website](#) for more events and updates coming up in 2014.

## We NEED Photo Submissions for the VHS 2015 Calendar!!!



The VHS is looking for quality native herp photos for our 2015 calendar.

Photos must be of a native Virginia reptile or amphibian. Images should have the subject in focus and with very little background

distraction. Photos will be required to be at least

2300 pixels in width x 1800 pixels in height in landscape (or horizontal) orientation. The calendar will also show the proper credit for each photograph. Images received by August 31<sup>st</sup> will be considered for the 2015 calendar, but any late submissions will be saved for consideration in the 2016 calendar. Please send your submissions to the VHS Store Manager, Patricia Crane, at

[Merchandise@vaherpsociety.com](mailto:Merchandise@vaherpsociety.com). Good Luck Herp Photographers!

## REMINDERS

### VHS Members Get Discounts at Zoos!

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 \$1 or \$2 off of the price of admission does not sound like much, most zoos, aquariums, and museums are expensive to maintain, and it represents 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, which will only need to be printed, copied and folded. Please have these cards handy when visiting. Click here to see a list of discounts. Then, go to the Zoo Updates section to find out the latest news on some of these facilities!

### Help Support the VHS!

Your support is a beautiful thing! With simple clicks on the internet you can help support the VHS and our mission to conserve, research, and educate the public on our native herps.

Not interested in a fundraiser, but still want to support the VHS? **Donations** are always accepted, in any monetary amount. 100% of your donation goes towards our cause and is tax deductible due to our 501(c)(3) tax-

exempt status. Donate online via PayPal or send your donation to our Treasurer.

Fundraisers that support our cause:

Bloomin' Bucks with Brent and Becky's Bulbs: It's simple...go to [www.bloominbucks.com](http://www.bloominbucks.com) (with no 'g') and from a pull-down menu of all of the organizations registered, select to **support VHS**. With one click, you are then sent to the Brent and Becky's Bulbs website where you can order whatever you want, in whatever quantity and color you want – books, bulbs, garden tools, plant supplements, gift certificates, and much more; and a percentage of the order goes to support our cause!



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**GoodSearch, GoodShop, and GoodDining:**  
You search, shop, or dine.  
They give, give, give.

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GoodSearch.com is a Yahoo-powered search engine that donates half its advertising revenue to the charities its users designate. Use it as you would any search engine, get quality search results from Yahoo, and watch the donations add up!

GoodShop.com is a new online shopping mall which donates up to 30% of each purchase to your favorite cause. Hundreds of great stores including Amazon, Target, Gap, Best Buy, eBay, Macy's and Barnes & Noble have teamed up with GoodShop and

every time you place an order, you'll be supporting your favorite cause. Download the *GoodSearch – Virginia Herpetological Society (NEWPORT NEWS VA)* toolbar, and our cause will earn money every time you shop and search online - even if you forget to go to GoodShop or GoodSearch first! The toolbar is available at:

<http://www.goodsearch.com/toolbar/virginia-herpetological-society>

The GoodDining Program allows members to discreetly earn donations for the VHS at thousands of participating restaurants, bars and clubs coast to coast. When you pay your bill for a qualified dine at a participating restaurant, bar or club using a credit/debit card you've registered with GoodDining, they track your total transaction amount and award donations based on your current Membership Level, which are automatically deposited into your GoodDining account. Sign up and don't forget to select the Virginia Herpetological Society as your charity of choice.

### Cafe Press - The VHS Store

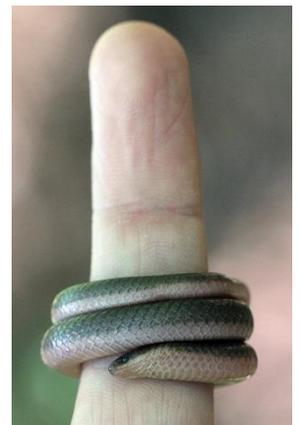
In this store you will find an assortment of merchandise intended to celebrate the diversity of amphibians and reptiles native to Virginia. Eventually, we will branch out into other non-herp and non-Virginian related wildlife. If you are visiting this site from out of state, our products are not exclusive to Virginians. Many of the species we feature can be found throughout a large part of the country. **All** proceeds from the sale of merchandise on this site go towards funding the VHS's mission.

# Annual Survey at James River State Park



Thanks to VHS President, Kory Steele and Vice President Mike Salotti for a well-organized and executed survey. We would like to thank the James River State Park Manager, Russell Johnson, Assistant Park Manager, Jim Jones and the rest of the park staff for their gracious hospitality. Special thanks to all the VHS member that were able to participate in the survey.

The 2014 Annual Survey at James River State Park provided us with beautiful scenery and excellent weather! Cold mornings and warm afternoons were ideal for hiking through the parks wooded hills and wetlands. We had nearly 70 herp enthusiasts attend, which was one of our most attended surveys in VHS history. As you'll see in the photos, we had plenty of fun. After several miles of walking, about 25 of us enjoyed chatting at a campfire social Saturday evening hosted by Caroline. Thanks Caroline!



Size does matter: Eastern wormsnake doing its best large constrictor imitation.



Albino Northern Watersnake

"The albino Watersnake is the purest of luck. We were trying to cross a small but narrow ravine with steep sides and a small stream in the bottom. The adults were all focused on getting up the other side and only the kids were looking down. One of them yells out "I see an albino corn snake", which was not too far off for his frame of reference. All the adults knew better and pretty much ignored him. The snake went into a hole and the kid had to dig it out, which he did. The moral of this story is to always have some sharp-eyed kids along if you want to find stuff!

# Salamanders!

No survey would be complete during Year of the Salamander without finding a few of these beauties!



**TOP:** Northern Red Salamander

**CENTER:** Pattie found a rare Plethodontidae salamander (Plethodon Bassproshopus).

**BOTTOM:** An underwater photo of some red-spotted newts

See these and more on the [Survey Summary Page](#) on the VHS website!

# Conservation Key

*VHS Conservation Committee - Pituophis melanoleucus (Northern Pinesnake)  
Sign Post Project  
by Dave Perry*

The 2014/2015 Conservation Committee is focused on projects for Virginia herp species that have a conservation status of Tier I through Tier IV as determined by the Virginia Department of Game and Inland Fisheries (VDGIF) and defined in the “Virginia Wildlife Action Plan”. VHS members volunteer to participate in individual Conservation Committee Projects.

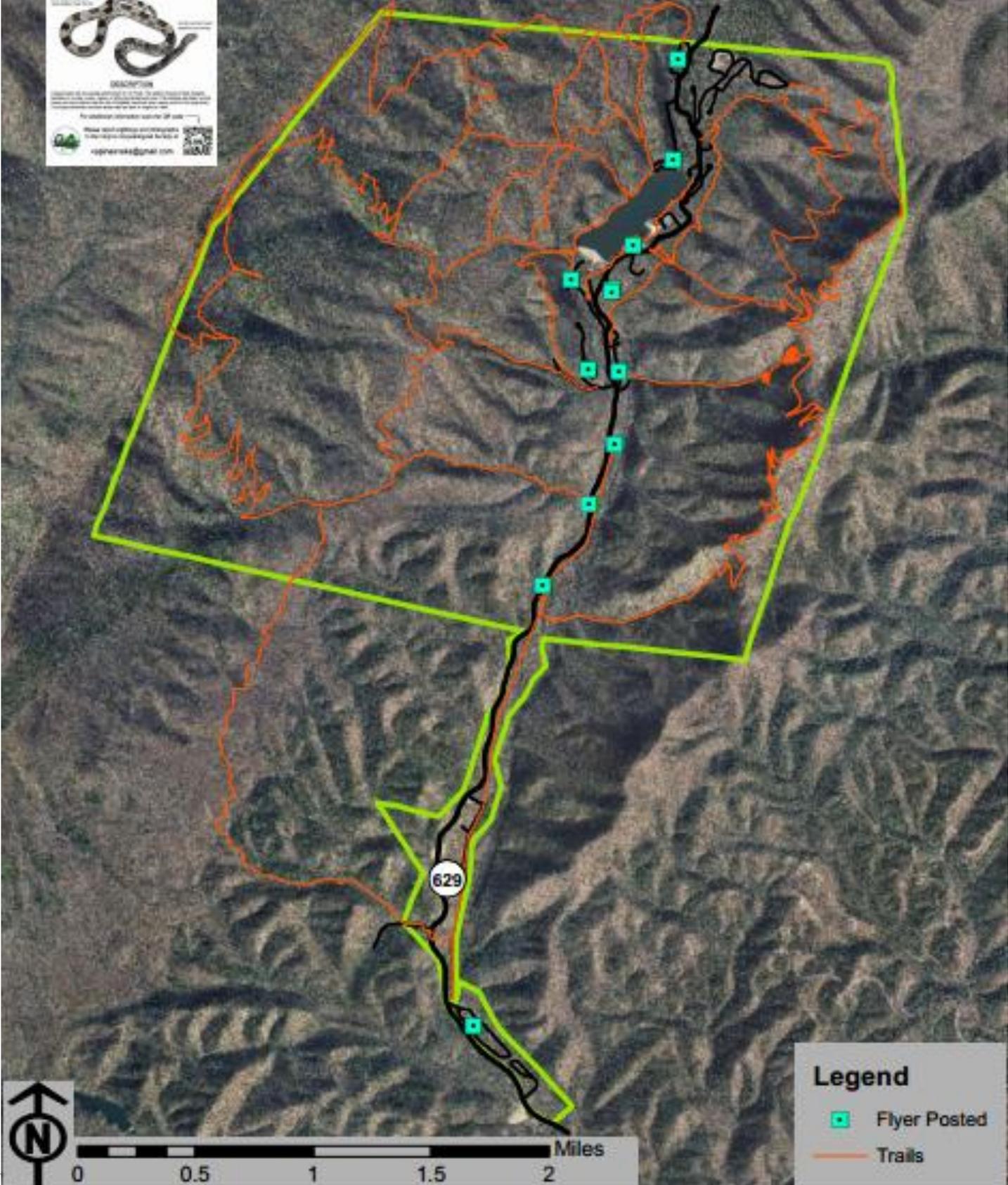
The Northern Pinesnake has Tier I conservation status i.e. “Faces an extremely high risk of extinction or extirpation. Populations of these species are at critically low levels, facing immediate threat(s) or occur within an extremely limited range. Intense and immediate management action is needed.” The Northern Pinesnake is highly secretive and was last documented in Virginia in 1989.

If it still exists in Virginia, human contact will most likely be an unpredictable random event. A Northern Pinesnake Sign Post Project was conceived to create public awareness about the need to report and photograph any public sightings. A Pinesnake Flyer, including a QR code for additional information and an email address for sighting reports, was developed by John White with input from Dr. Tom Akre, J.D. Kleopfer and Susan Watson. The plan was to post the flyer at trailhead kiosks within parks and wildlife management areas within the documented or projected range of the Northern Pinesnake. In May, a total of 42 signs were placed in Claytor Lake (2), Douthat (11) and Hungry Mother State Parks (16), Short Hills Wildlife Management Area (1) and the Nature Foundation at Wintergreen (12). Although Hungry Mother State Park is slightly south of the projected range, park personnel wanted to participate.

There have been no confirmed sightings to date. However, John and Deborah Strott did report seeing a large snake on a trail behind the campus of Dabney Lancaster Community College in Clifton-Forge on June 22, which they later identified as a Northern Pinesnake after seeing one of the sign posts at Douthat State Park. Lance Benedict traveled to Alleghany County to meet and interview John Strott to obtain his account of the sighting, get GPS coordinates and a habitat description for the sighting location and to explore the nearby area. Unfortunately, the Strott’s reported sighting could not be confirmed.

VHS would like to thank Forrest Atwood, Al Cire, Nathan Clark, Tanya Hall, Josh Palumbo, Reed Stanley and Tyler Urgo for supporting the sign post project in their respective parks and wildlife management areas. Hopefully their efforts will help lead to a documented sighting.

# Northern Pinesnake Flyers at Douthat State Park



## Legend

- Flyer Posted
- Trails

# **\*Northern Pinesnake\***

Have you seen this harmless nonvenomous snake?  
The Northern Pinesnake may now be extinct in Virginia

Dark blotches become  
more distinct near the tail.



Small, pointed head  
used for burrowing.

## **DESCRIPTION**

A large snake with an average adult length of 4 to 5 feet. The pattern consists of dark irregular blotches on a white, cream, yellow, or light gray background color. The blotches are black, turning brown and more distinct near the tail. Elongated snout and head seems small for the large body. This highly beneficial, secretive snake was last seen in Virginia in 1989.

*For additional information scan the QR code*



Please report sightings and photographs  
to the Virginia Herpetological Society at:

**vapinesnake@gmail.com**



## Smooth Greensnake

### Project and Request

Attention, all Virginia biologists and wildlife personnel! Brian Blais is a M.S. graduate student at Black Hills State University (SD) under Dr. Brian Smith investigating the phylogeography of the smooth green snake, *Opheodrys vernalis*, across its North American range. They are inquiring for VA samples, seeking tissue donations until September 2014 from those who would be willing to donate tissue samples and GPS coordinates to them. These tissue samples consist of a small tail tip ( $\leq 10\text{mm}$ ), done *in situ*, then re-releasing snakes at site of capture relatively unscathed. Mr. Blais will also accept tissue from recently deceased specimens, if the tissue has not desiccated or degraded, as well as shed skins. Tissue that may already be housed in a collection, pending it has not seen formalin, which rapidly degrades DNA material, will also be accepted. The aim is for a sample size of five to ten, but he will happily accept any.

Please direct any inquiries of this project to: [Brian.Blais@yellowjackets.bhsu.edu](mailto:Brian.Blais@yellowjackets.bhsu.edu).

If you can get into the field and collect tissue this year, please first contact Brian Blais for specifics on protocol to follow, and he may be able to assist you with supplies, such as tissue cryo tubes.



CONTINUE TO CELEBRATE YEAR  
OF THE SALAMANDER!



Partners in Amphibian and Reptile Conservation (PARC) designated 2014 as the Year of the Salamander! In continuing to celebrate this designation, they have shared great information regarding salamanders on the [Facebook page](#) set up for Year of the Salamander. This page includes the following interesting article of general salamander science significance: [Limb regeneration in humans: salamanders may hold the key](#). It also includes a [link](#) with more local significance, showing some awesome underwater photos of eastern newts (and other vernal pool inhabitants) at Maple Flat Ponds, in Virginia, provided by Steven David Johnson.

# Herp Trivia

CAN YOU IDENTIFY THEM ALL?



1. Do either of the species in the last photo (I and J) have any special legal status in Virginia?
2. True or False: According to a recent study in five rivers in the southeastern United States, females of most aquatic turtle species are disproportionately vulnerable to common anthropogenic causes of mortality, such as fish hook ingestion and being struck by vehicles during nesting seasons.
3. What species of native salamander was recently documented in a new county during an inventory of herp and bird species on National Park Service property near the City of Richmond? (Thanks to long-time VHS member Dr. Mackler for his efforts on this work!)
4. True or False: Male Northern Copperheads (*Agkistrodon contortrix mokasen*) have a longer and more bifurcated tongue than females.
5. What can you do to help species, like the spotted salamander, who need to migrate to vernal pools during rainy nights in late winter to early spring?
  - a) Watch for them on the roads and avoid parts of roads that are their favorite crossing spots;
  - b) Support the construction of crossing tunnels underneath roads;
  - c) Protect their breeding (vernal) pools and adjoining natural habitats; or
  - d) All of the above.
6. What group of herps have been shown in a recent study (Best and Welch, 2014) to potentially help forest ecosystems release less carbon into the air and instead keep it locked safely underground; and this group of herps does this by eating many of the leaf-shredding insects and other invertebrates that would cause the carbon to be released into the air during their shredding?
7. How many people visited and learned from the VHS exhibit at the Virginia Living Museum's annual event called Reptiles Bizarre & Beautiful, held February 15-17?
  - a) Under 100
  - b) 500
  - c) Over 2000

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## New Books

### How Snakes Work: Structure, Function and Behavior of the World's Snakes

**Author:** Harvey B. Lillywhite

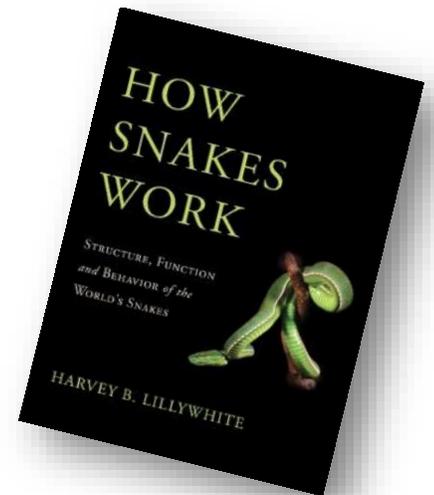
**Publisher:** Oxford University Press

**Publication date:** February 2014

**Price:** \$65.00, which includes S&H (through [HerpDigest](#)); \$49.95, plus \$5.50 S&H (through [Oxford University Press](#)); OR as low as \$38.23 (through [Amazon.com](#))

**Description:** This book brings together a lifetime of experience, to explain in easy-to-understand terms what snakes do, and how and why they do it. I am sure that this attractive volume not only will educate people about snakes, but also will inspire its readers and help them to understand why we need to conserve these amazing creatures for future generations.”

—Rick Shine, University of Sydney



A complete guide to the functional biology of snakes, containing 190 color photographs, used as visual examples to illustrate various biological features of snakes.

Anyone can look at a snake and see a creature unique unto itself, a reptile with a set of zoological and biological traits that are entirely its own. Just looking at this distinct animal raises many scientific questions. With regard to evolution, how did such an animal come to be? How does a snake move, and how do its sense organs differ from that of other reptiles? How does it eat, and how does it reproduce? Essentially, how does a snake "work"? In *How Snakes Work: The Structure, Function and Behavior of the World's Snakes*, leading zoologist Harvey B. Lillywhite has written the definitive scientific guide to the functional biology of snakes. Written for both herpetologists and a more general audience with an interest in the field, *How Snakes Work* features nearly two hundred color images of various species of snakes, used to provide visual examples of biological features explained in the text.

Chapter topics include the evolutionary history of the snake, feeding, locomotion, the structure and function of skin, circulation and respiration, sense organs, sound production, temperature and thermoregulation, and reproduction. Containing all the latest research and advances in our biological knowledge of the snake, *How Snakes Work* is an indispensable asset to professional zoologists and enthusiasts alike.

Harvey B. Lillywhite is a Professor of Biology at the University of Florida and the Past Director of the University of Florida Marine Laboratory at Seahorse Key.

## The Texas Tortoise: A Natural History (Animal Natural History Series)

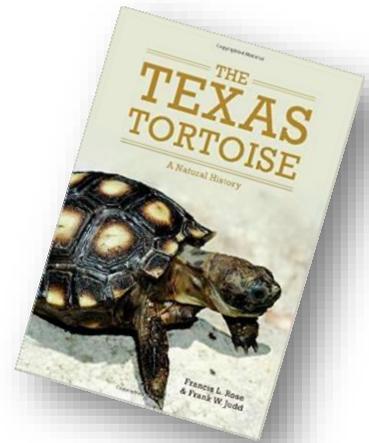
**Authors:** Francis L. Rose, Ph.D. and Frank W. Judd, Ph.D.

**Publisher:** University of Oklahoma Press

**Publication date:** June 2014

**Price:** \$39.95, plus \$6.00 S&H via USPS, Priority Mail, or \$9.00 via UPS (through [HerpDigest](#)); \$39.95, \$5.00 via USPS, Standard Mail, or \$8.00 via USPS, Priority Mail (through [University of Oklahoma Press](#)); OR as low as \$35.75, S&H may vary (through [Amazon.com](#))

**Description:** An engaging study of North America's most neglected species of tortoise.



Remnants of an ancient lineage, tortoises date back to the Eocene. Among the five species remaining in North America, Texas tortoises are the smallest in size and inhabit some of the harshest arid environments known. They are also the most neglected by wildlife personnel. In *The Texas Tortoise*, biologists Francis L. Rose and Frank W. Judd draw on decades of research to offer the first comprehensive account of this fascinating but threatened species.

The authors begin by explaining the relationship of the Texas tortoise to other species, fossil as well as extant. They delineate the Texas tortoise's environment and describe what it eats, how the animal grows and reproduces, and how it behaves. Throughout, Rose and Judd write eloquently about the threats to the species' survival, reflecting deep concern about its future protection.

The authors also discuss Texas tortoises' significance in supporting other species in their environment—southern Texas and northeastern Mexico—where their survival is threatened by habitat reduction and increasing road traffic. “If you see a tortoise on the roadway,” Rose and Judd admonish the reader, “move it to safety, and drive away as quickly as legally allowed.” It is in fact illegal to collect or possess a Texas tortoise. But for those who do, this book advises how to care for the animal.

Tortoises have enjoyed a splendid and diverse history. That they did so well for so long is perplexing, the authors note, as the animals are slow and do not actively defend themselves against predators. The Texas Parks and Wildlife Department lists Texas tortoises as “threatened,” and Rose and Judd call on the federal government to do the same. Biologists, conservationists, and turtle enthusiasts alike will find this guide to Texas and other tortoises invaluable.

Francis L. Rose is co-author of *Wildflowers of the Llano Estacado*.

Frank W. Judd is co-editor of *The Laguna Madre of Texas and Tamaulipas*. Both are authors of numerous scholarly articles on turtles

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# News

## Minnesota's First Turtle Tunnel Under Construction

<http://www.kare11.com/story/news/local/2014/06/10/minnesotas-first-turtle-tunnel-under-construction/10301299/>

John Croman, KARE - 7:50 p.m. EDT June 10, 2014

MAY TOWNSHIP, Minn. -- Minnesota's first tunnel designed specifically for migrating turtles is being installed on a rural road near Big Marine Lake in Washington County.



MINNESOTA'S FIRST TURTLE TUNNEL UNDER CONSTRUCTION (PHOTO: KARE)

these turtles across the road."

Mott said those involved in the study picked this particular spot along Washington County Highway 4 after two years of research found a high mortality rate for turtles, snakes and salamanders attempting to cross the two-lane road.

The turtle tunnel is higher than a normal drainage culvert, to keep it free of storm water. It also has slots built into the top of it, skylights if you will, to provide natural lighting.

"The light is spread all the way through the tunnel, so the turtles have a sense of something on the other side. They don't want to get themselves into a dead end situation," Mott explained.

Because turtles don't typically respond to road signs, a long fence will be erected on either side of the highway to funnel the turtle traffic toward that focal point of the tunnel. The hope among researchers is that the turtles will recognize it as the most efficient way to cross.

The special culvert system, imported from Germany, may become a prototype used by highway planners and natural resource managers throughout the state if the experiment saves lives of the roaming reptiles.

"The tunnel presents an option for that turtle to cross the road safely, but we're also hoping it solves a traffic hazard as well," Peter Mott, Washington County Parks Department planning director told KARE.

"We always see people stopping along this busy road, especially this time of year, jumping out of their cars and trying to assist

According to Chris Smith of the Minn. Herpetological Society turtles in that area made several migrations each year. The largest one comes in the spring when they move from their wintering homes beneath the ice near Big Marine Lake to their nesting areas in the wetlands zoned south of the highway.

The tunnel is part of a \$50,000 research project funded by the Minn. Dept. of Natural Resources, the University of Minnesota and the Herpetological Society. Mott pointed out, however, that the cost of one turtle-related accident involving an auto or a motorcycle could easily exceed that amount.

The study will continue for the next two years so researchers can determine how the creatures react to the tunnel option. If other tunnels are warranted they should be less expensive than the prototype used in the Washington County project.

The female turtles especially make the journey seeking warmer, sunnier areas to make their nests, according to Smith. Later in the year the turtles will cross the road again as they return to the lake. Young hatchlings, too small to be seen by motorists moving 50 miles per hour, also make the treacherous crossing.

Smith said the area is home to common Minnesota turtles such as Painted Turtle and Snapping Turtles, as well as the more rare Blanding's Turtle, which is on the state's threatened species list. All of the turtle populations in the suburban and exurban areas have suffered higher mortality rates as traffic levels have increased in recent decades.

While turtles have been known to use a short storm drain culvert to get to the other side of a highway, those culverts are often filled with rain water the same time the turtles need to cross. The corrugated steel culverts also present issue because the metal ridges are difficult for animals with short legs to navigate.

<p><b>Northern Va Reptile Expo</b>            8/23, 10/11, 12/13/2014            Prince William County Fairgrounds            Manassas, VA 20108            \$7 / \$3 child            9 am to 3 pm  <a href="http://mdreptilefarm.com/northern-virginia-reptile-expo/">http://mdreptilefarm.com/northern-virginia-reptile-expo/</a></p>	<p><b>Richmond Reptile Expo</b>            10/25/2014            Richmond International Raceway Colonial Bldg, 602 E            Laburnum Ave Richmond, VA 23322            \$8 / \$3 child            9 am to 3 pm  <a href="http://mdreptilefarm.com/richmond-virginia-reptile-expo/">http://mdreptilefarm.com/richmond-virginia-reptile-expo/</a></p>
<p><b>Fredericksburg Reptile Expo</b>            9/13/2014            Fredericksburg Fairgrounds            2400 Airport Road            Fredericksburg, VA 22401            \$8            9 am to 3 pm  <a href="http://mdreptilefarm.com/fredericksburg-reptile-expo/">http://mdreptilefarm.com/fredericksburg-reptile-expo/</a></p>	<p><b>Hampton Roads Reptile Expo</b>            9/7/2014            Point Plaza Suite            950 J. Clyde Morris Blvd.            Newport News, VA 23601            \$7 /free child (under 3)            9 am to 4 pm  <a href="https://www.facebook.com/Hrrexp">https://www.facebook.com/Hrrexp</a></p>

# Upcoming Events

# Rescue Me!

## Virginia Reptile Rescue (VARR)

Bonnie Keller has operated VARR since 1999 out of her home. She has tons of experience with captive reptiles along with plenty of compassion for them. VARR currently has several ball pythons, bearded dragons, and Russian tortoises up for adoption. Check out their website ([vareptilerescue.org](http://vareptilerescue.org)) and the following featured available animal:



Raul is a lovely male bearded dragon. He needs someone experienced with this species to help him not be so defensive. No breeding! Please apply to adopt Raul now!

Also, checkout the VARR store for a plethora of items you can purchase with their logo and the "Don't Let It Loose" logo, plus a portion of the proceeds supports the rescue!

## Virginians Interested In Protecting Every Reptile (VIIPER)

VIIPER is a non-profit reptile rescue and enthusiasts group based in the Hampton Roads area of Virginia. Bobby Jenkins is the president and founder of this group, which began in 2008. VIIPER is devoted to educating the public about reptiles and protecting these

animals. Check out their [website](#) for their list of [adoptable animals](#), which includes the following:

- 2 ball pythons
- 1 albino cornsnake
- 1 red tail boa (1 year old)



## Central Virginia Reptile Rescue

This is a small reptile rescue run out of the home of its founders. They started as pet owners with a deep love for their reptiles and then noticed the need to form a rescue for other reptiles in their area. Check out their [website](#) for a list of [available animals](#), including

1 female Sulcata

1 female Okatee cornsnake

1 salmon red tail boa

Also, check out their [donations page](#) to see how you can donate any much needed equipment, food, and funding. Additionally, they have [a great story about the rescue of "Wunder"](#) the amazing red tail boa, along with [updates](#) on his long road to recovery

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# Zoo Updates

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## Reptiles Alive!

Fall will be busy this year!. The Fredericksburg Pet Expo will feature Reptiles Alive all day both Saturday September 20 and Sunday September 21. We will be presenting educational live reptile shows on stage and also have a live reptile exhibit where folks can meet with our educator, ask questions, and meet some our animals more up close.



In October, we will be presenting our stage show "Reptiles Alive!" at the City of Fairfax Fall Festival on the 11th at 3:20 pm. On October 25, we will present "Creepy Creatures Alive!" at the Falls Church Halloween Carnival at 6:15 and 7:15.

Check out these and many other great events scheduled for Reptiles Alive! <http://reptilesalive.com/publicevents/publicevents.htm>

Here are a few samples from the long list of events coming up:

**Wednesday 8/27**  
10:30am-11:15am  
Live Animal Show  
Reptiles Alive!  
[Fairfax Corner Center](#)  
Fairfax, VA

**Sunday 9/7**  
8:00am-10:30am  
Live Animal Display  
Reptiles Alive  
Encounters  
[Eye Run for Prevention of Blindness](#)  
Westfield  
Montgomery Mall  
Bethesda MD

**Saturday 9/13**  
10:00am-11:00 am  
Live Animal Show  
Wetland Reptiles Alive!  
[Broadlands Nature Center](#)  
Broadlands VA

**Saturday 9/13**  
Various Times  
Live Animal Show  
Reptiles Alive! & Reptile Encounters  
[B101.5 KidsFest!](#)  
Spotsylvania Town Center  
Fredericksburg VA

**Saturday 9/20**  
11:00am - 5:00pm  
Live Animal Shows  
ALL DAY LONG!  
Reptiles Alive +  
Reptile ENCOUNTERS  
Fredericksburg Pet Show  
[Fredericksburg Expo & Conference Center](#)  
Fredericksburg VA

Hope to ssssee you all there!

Thanks! And remember, VHS Members receive a discount when booking shows!

– Caroline Seitz



Herp News at  
**The Virginia Living Museum**

For any families with

youngsters (or those who are young at heart) that want the opportunity to dine in our "Dinos Live" exhibit and learn about turtles both past and present, please join us at the VLM for our "Snapper Bites". We will set out tables for up to 12 people where everyone can enjoy complimentary pizza from Papa John's and watch us feed a live snapping turtle. The program begins every Tuesday at 5:15 p.m. until the last Tuesday of the Dinosaurs exhibit which is August 26<sup>th</sup>. Tickets can be purchased ahead of time, either online or at the museum, and are \$15 for members; \$25 for non-members. Here is a link to the event description:

<http://thevlm.org/events/feedings-tours/seasonal/>

On November 8<sup>th</sup>, we'll have our second annual "Frogs and Friends" event at the Museum where we'll pay homage to the interesting and sometimes mysterious world of amphibians. We will have several exotic amphibian species from around the globe helping teach people about the importance of amphibians, as well as the threats they currently face. It will be geared towards kids of all ages, and will include fun activities and crafts.

*Located at 524 J. Clyde Morris Blvd., Newport News, VA. Fall hours begin Sept. 3: Monday through Saturday 9 a.m. to 5*

*p.m. and Sunday noon to 5 p.m. Admission is \$17 for adults and \$13 for children (ages 3-12). Ages 2 and under are free. VHS Members receive a discount of \$1 off admission.*

Call [757-595-1900](tel:757-595-1900) or visit [www.thevlm.org](http://www.thevlm.org) for more information.

– Travis Land



**Mill Mountain Zoo**

was busy with "spring cleaning" this year. Our Burmese Python exhibit refurbish was completed earlier this year and the pythons have had quite the time arranging their house how they see fit. We have also completed one of the largest projects in our herp house, the Yellow Spotted Amazon River Turtle exhibit. The exhibit was built thanks to a local Girl Scout troop, who raised all the funds and built the exhibit, including the filtration system. With all the changes it's like a whole new building and it has a new name to go with it: The House of Scales and Tails.

*Located at JP Fishburn Pkwy., Roanoke, VA. Open Daily 10:00 am to 4:30 pm. Grounds close at 5:00 pm. Admission is \$7.50 for adults, \$5.00 for children ages 3-11 years old, and free for children under 2. A 10% discount is available for seniors, military, and AAA members. Zoo Members get in free, and VHS members receive \$1 off of admission.*

– Kontessa St.Clair

# VIRGINIA LITERATURE

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These selections represent articles published or in press during the period January to June 2014 and some from 2013 and 2012 that were inadvertently left out in the past. 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.

Compiled and formatted by Susan Watson.

☞ Grant, Evan H. Campbell, Amber N. M. Wiewel, and Karen C. Rice. Mar 2014. Stream-water Temperature Limits Occupancy of Salamanders in Mid-Atlantic Protected Areas. *Journal of Herpetology* Vol. 48(1): 45-50.

☞ Abbey-Lambertz, Mark, Andrew Ray, Megan Layhee, Christine Densmore, Adam Sepulveda, Jackson Gross, and Barnaby Watten. Mar 2014. Suppressing Bullfrog Larvae with Carbon Dioxide. *Journal of Herpetology* Vol. 48(1): 59-66.

☞ Steen, David A., Christopher J. W. McClure, William B. Sutton, D. Craig Rudolph, Josh B. Pierce, James R. Lee, Lora L. Smith, Beau B. Gregory, Danna L. Baxley, Dirk J. Stevenson, and Craig Guyer. Mar 2014. Copperheads are Common when Kingsnakes are Not: Relationships Between the Abundances of a Predator and One of their Prey. *Herpetologica* Vol. 70(1): 69-76.



☞ Lamont, Margaret M. and Ikuko Fujisaki. Mar 2014. Effects of Ocean Temperature on Nesting Phenology and Fecundity of the Loggerhead Sea Turtle (*Caretta caretta*). *Journal of Herpetology* Vol. 48(1): 98-102.

☞ Symmank, Matthew E., Christopher E. Comer, and James C. Kroll. Apr 2014. Using Infrared-Triggered Cameras to Monitor Activity of Forest Carnivores. *Southeastern Naturalist* Vol. 13(sp5): 172-183.

☞ Upperman, Amy J., Timothy M. Russell, and Randolph M. Chambers. Mar 2014. The Influence of Recreational Crabbing Regulations on Diamondback Terrapin By-catch. *Northeastern Naturalist* Vol. 21(1): 12-22.

☞ Boitet, Evan R. and Alfred J. Mead. Mar 2014. Application of GIS to a Baseline Survey of Vertebrate Roadkills in Baldwin County, Georgia. *Southeastern Naturalist* Vol. 13(1): 176-190.

☞ Mitchell, Joseph C. 2013. Emmett Reid Dunn and the early history of herpetology in Virginia. *Banisteria*. 41: 27-39.

- ☞ Roble, Steven M. 2013. Ophiophagy in Red-shouldered Hawks (*Buteo lineatus*), with the first record of Eastern Wormsnake (*Carphophis amoenus*) as prey. *Banisteria* 41: 80-84.
- ☞ Niccoli, Ryan J. and John D. Kleopfer. 2013. Status of Mabee's Salamander, *Ambystoma mabeei*, in Virginia: A spatial comparison of habitat condition at sites of known occurrence. *Banisteria* 41: 85-92.
- ☞ Hoffman, Richard L. 2012. Spot-problem solving: A new approach to Virginia herpetology for the next millennium. *Banisteria* 40: 24-31.
- ☞ Mitchell, Joseph C. 2012. Amphibians and reptiles of the Eastern Shore of Virginia National Wildlife Refuge and Fisherman Island National Wildlife Refuge. *Banisteria* 39: 21-33.
- ☞ Tupper, Todd A., Tatiana Galitzin, Christine Bozarth, and David M. Lawlor. 2012. Patterns of frog and toad vocalization in Fairfax County, Virginia. *Banisteria* 39: 34-46.
- ☞ Hopkins, William A., William E. Moser, David W. Garst, Dennis J. Richardson, Charlotte I. Hammond, and Eric A. Lazo-Wasem. 2014. Morphological and molecular characterization of a new species of leech (Glossiphoniidae, Hirudinida): Implications for the health of its imperiled amphibian host (*Cryptobranchus alleganiensis*). *ZooKeys* 378: 83-101.
- ☞ William A. Hopkins and Sarah E. DuRant. 2011. Innate immunity and stress physiology of eastern hellbenders (*Cryptobranchus alleganiensis*) from two stream reaches with differing habitat quality. *General and Comparative Endocrinology* 174: 107-115.
- ☞ Gates, J. E., and D. G. Mackler. 2013. Bird and herpetofaunal inventories of eight unit and tract additions to Richmond National Battlefield Park, Virginia. Natural Resource Technical Report NPS/MIDN/NRTR—2013/828. National Park Service, Fort Collins, Colorado. To access the pdf file, you first need to go through the NPS portal at <https://irma.nps.gov/App/Reference/Profile/2205309/> , then download the pdf file at RICH\_2013\_Gates\_Bird\_Herp\_Inventory\_2205309.pdf
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- ☞ MacNeil, Jami E. and Rod N. Williams. Dec 2013. Effectiveness of two artificial cover objects in sampling terrestrial salamanders. [Herpetological Conservation and Biology](#) 8(3): 552-560.
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- ✓ Hanlon, S. M., D. Smith, J. L. Kerby, M. J. Parris and J. E. Moore. 2014. Detection of *Batrachochytrium dendrobatidis* infections in amphibian populations at Edward J. Meeman Biological Field Station, Tennessee, USA. *Herpetological Review*. 45 (1): 32-34. [[hanloc2107@gmail.com](mailto:hanloc2107@gmail.com)]
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# Virginia Natives: Eastern Hellbender



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**Status:** Virginia Wildlife Action Plan Rating Tier II - Very High Conservation Need - Has a high risk of extinction or extirpation. Populations of these species are at very low levels, facing real threat(s), or occur within a very limited distribution. Immediate management is needed for stabilization and recovery.



**Characteristics:** This is a large aquatic salamander with a flattened head, and stocky body with fleshy folds of skins on its sides, a keeled tail, and powerful limbs. The color is usually chocolate brown with darker marking on the dorsum. The adults reach a total length of 76 cm. The head is very broad and flattened with a wide and very flattened snout. The very small, black eyes are widely separated and placed dorsally. The neck width is as great as or slightly greater than the head. The color in life is from yellow-brown, red-brown, to dark brown with varying numbers of black blotches and spots. Ventrally, they are lighter and sparsely spotted if at all. Mating takes place in late summer. The male excavates and guards a nest in which a female may lay eggs. This species inhabits moderate to fast flowing streams and rivers with large flat rocks. It nests under rocks, logs, and other objects. The hellbender has a protective slime that makes them difficult to handle.

**Distribution:** The hellbender is known from the New, Holston, Clinch and Powell river drainages and from 23 separate sites. It is distributed widely in rivers of the Ohio and Tennessee systems. It is known from small to large streams and rivers where cover in the form of flat rocks is available. The water is usually cool and clear and well oxygenated. The highest densities in Missouri were correlated with the number of large shelter rocks. Impoundments, siltation, and pollution probably impact populations. They are found in water that is clear, clean and well oxygenated.

**Foods:** This species is primarily carnivorous, eating primarily crayfish, but also some fish which are often scavenged. They mainly eat at night. Trout are not consumed.

Eastern Hellbender ( <i>Cryptobranchus alleganiensis alleganiensis</i> )	
Common Name:	Eastern Hellbender
Scientific Name:	<i>Cryptobranchus alleganiensis alleganiensis</i>
Genus:	<i>Cryptobranchus</i> is derived from the Greek and means "hidden gills". This refers to the lack of large external gills.
Species:	<i>alleganiensis</i> means belonging to the Allegheny Mountains
Subspecies:	<i>alleganiensis</i> means belonging to the Allegheny Mountains
Average Length:	11.5 - 20 in. (29.2 - 51 cm)
Record length:	male 27 in. (68.6 cm), female 29.1 in. (74 cm)

# Herp Trivia Solutions

## Identification

- A. Both salamanders are Spotted Salamanders (*Ambystoma maculatum*). There are known populations of unspotted Spotted Salamanders in Virginia.
- B. Southern Leopard Frog (*Lithobates sphenocephalus*)
- C. Snapping Turtle (*Chelydra serpentina*)
- D. Eastern Gartersnake (*Thamnophis sirtalis sirtalis*),
- E. Northern Watersnake (*Nerodia sipedon sipedon*)
- F. Spotted Turtle (*Clemmys guttata*)
- G. Eastern Painted Turtle (*Chrysemys picta picta*).
- H. Both are Eastern Cricket Frogs (*Acris crepitans*).
- I. Barking Treefrog (*Hyla gratiosa*)
- J. Eastern Chicken Turtle (*Deirochelys reticularia reticularia*).

## Questions

1. The Barking Treefrog is listed as State Threatened and the Eastern Chicken Turtle is listed as State Endangered.
2. True
3. Eastern Lesser Siren (*Siren intermedia intermedia*)
4. (Similar to the antennae of male moths, supposedly the longer tongue would aid in detecting and tracking potential female mates. The study that discovered this claims it is the first documentation of sexually dimorphic tongues of a tetrapod. <http://onlinelibrary.wiley.com/doi/10.1111/j.1469-7798.2007.00396.x/abstract>)
5. All of the Above
6. Salamanders!
7. Over 2,000

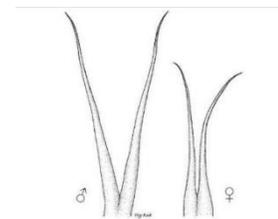


Figure 1 Illustration drawn from preserved specimens demonstrating the relationship between the lengths and tongue widths in male (left) and female (right) copperheads, *Agkistrodon contortrix*. Specimens depicted were equal in body size (snout-vent length).