Virginia Herpetological Society Newsletter

Volume 24, Number 1
March 2014

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Home Page:	http://www.vaherpsociety.com/
Online Store:	http://www.cafepress.com/vaherpsociety
Facebook Page:	http://www.facebook.com/vaherpsociety

Newsletter Editor:Susan Watson newsletter@vaherpsociety.com

COMING EVENTS		
EVENT	**LOCATION**	**DATES**
VHS Annual Spring Survey & Meeting	Buckingham County, James River State Park	May 16-18
2015 Calendar Submissions	Merchandise@vaherpsociety.com	Aug 31

VHS Business

1) VHS New Officers

Please welcome the newly elected officers of VHS, as voted in during the VHS Annual Fall Meeting back on October 5, 2013!

A big welcome back is in order for Kory Steele as our current VHS President, returning to this position after being in it during the 2009-2011 term.

A big welcome to our new face in the VHS Executive Committee goes to Mike Salotti, who was elected as our current VHS Vice President. Mike found out about VHS and became a member three years ago, when he decided to start posting pictures of native wildlife for followers to identify on the Virginia State Parks (VSP) Facebook page. As an employee for VSP, in the Virginia Department of Conservation and Recreation, Mike makes it a personal goal to use the VSP Facebook page to spread awareness and information about native herpetofauna. Since they are often the most misunderstood animals. So far, he has attended two surveys, in 2013, the Frances-Emma BioBlitz and the Spring Survey at False Cape State Park and Back Bay National Wildlife Refuge. He also participated in Snake Fungal Disease (SFD) research to find snakes with possible signs of SFD in Back Bay NWR (Guthrie grant), in September 2013.

Mike Salotti with ball python

Another big welcome into new and challenging positions goes to former VHS Vice President, Dave Perry. Dave was elected as our current VHS Secretary/Treasurer, and agreed to be appointed as our current VHS Conservation Committee Chair. Everyone in VHS is grateful to these individuals for their dedication to serve in these positions and look forward to upcoming events, challenges, and progress for VHS with these officers!

On that note, everyone in VHS is also grateful for the VHS Immediate Past President, Larry Mendoza, for great service as our VHS President the past two years! Larry did a great job organizing surveys, working on more collaboration with other groups such as the Smithsonian, serving on the Dangerous Animal Initiative Workgroup, and even working with a state senator and VHS to attempt to propose an official state reptile and state amphibian. Even though the proposals for state herps did not come to fruition during last year's General Assembly, Larry took and important first step in bringing this to reality. Hopefully, we will find a year when the General Assembly will be open enough to these proposals (this is always tricky).

Last but not least, everyone in VHS is very grateful to service of our past VHS Secretary/Treasurer, Emily Steele. Emily did a wonderful job at getting the VHS bank account modernized, in compliance with our non-profit status, maintained accurately, and kept updated to the rest of VHS via regular communication.

We will miss the service of our past officers, and look forward to the service from our current officers!

2) VHS Annual Spring Survey & Meeting Friday-Sunday, May 16-18

The VHS will be holding our Annual Survey at James River State Park on the weekend of May 16-18, 2014, rain or shine. This park is over 1,500 acres, and includes three miles of riverfront to survey and 15 miles of trails. We will be splitting into groups to catch or observe the Park's herpetofauna, and the results will be published in our journal. No experience is required, nor is handling of any animals. There are many forms of recreation available for family members not participating in the survey, including fishing and rentals for canoes, tubing, and bicycles.

Registration: Registering allows the VHS to plan for more than usual participants, and for us to notify you of any last minute changes. **Please register!**

Location: James River State Park
104 Green Hill Drive
Gladstone, VA 24553

Preparation: As is typical for our surveys, expect to do a lot of walking on moderately difficult terrain. A group will be designated the "Kids Group" for children and those with limited mobility that will be based in a relatively easier terrain and the closest to facilities.
See our **guide for VHS surveys.**

Event Schedule:

1. Friday, May 16 – Business Meeting (6PM to 7PM) and Survey Coordination (7PM to 9PM)
2. Saturday, May 17 – Main Survey (8AM to 3PM)
   – Survey wrapup (3-4PM) (See photos and captured animals from other groups)
   – Campfire social (Exact location and time TBD at the Survey wrapup)
3. Sunday, May 18 – Secondary Survey, VHS Members only, limited space (8AM to 12PM)
   The location and time to meet will be available only to VHS members

**Participation in all events is not required. You may leave as needed.*

On-Site Lodging: James River has 16 cabins, 2 lodges and 50 campsites. All cabins and lodges have full kitchens with ovens, microwaves and refrigerators. Please bring food as the nearest restaurant is about 20 miles away. Lodging prices are as follows:

1. 2 bedroom cabins allow a maximum of 6 people (1 bathroom, 1 queen bed and 2 sets of bunk beds). - $106/night
2. 3 bedroom cabins allow a maximum of 8 people (2 bathrooms, 1 queen bed, 2 single beds in second bedroom and 2 sets of bunk beds in third bedroom). - $132/night
3. Lodges allow a maximum of 16 people (3 bathrooms, 2 queen size beds in 2 bedrooms, 2 single beds in 2 bedrooms, 2 sets of bunk beds each in 2 bedrooms). – $332/night
4. Red Oak Campground can have a maximum of 6 people per site. These sites have electricity and water. $30/night
5. Canoe Landing and Branch Pond Campgrounds are tent only and allow a maximum of 6 people per site. These sites have no electricity or water. $13/night

*The Va State Parks is offering a discount on lodging: http://www.virginiaoutdoors.com/article/more/4709

Cost:
-There is no survey-specific fee by the VHS to attend any of the events.
-James River State Park is allowing us free parking for our spring survey. Parking is limited, so they ask that we use the open field located near the visitor center. This will be marked on the satellite map.
-A VHS membership is required to attend the Sunday survey. Acquiring a membership before the survey is preferred: http://www.virginiaherpetologicalsociety.com/vhs-membership/membership.html
-The Virginia State Parks is offering a 20% discount on gift cards, which can be used to lodging reservations: http://www.virginiaoutdoors.com/article/more/4709

Membership Benefits for this Survey:
-Exclusive access to a unique survey site
-Field hooks lending (limited quantities available- first come, first serve basis)
-More benefits are being finalized
**Members are encouraged to bring their printed out Membership Card*.

Park Website: http://www.dcr.virginia.gov/state_parks/jam.shtml
Park Phone: (434) 933-4355
For Reservations: 1 800 933-7275

Mobile Phone Reception:
Verizon: fair around the cabin area and visitor center.
All other carriers are spotty to absent.

More Information: Attendees are encouraged to visit the VHS Facebook page for this event to ask questions, and coordinate carpooling/ lodging sharing.
https://www.facebook.com/events/702827083061948/

Contact/ Leader: Any other inquiries can be sent to: president@vaherpsociety.com **AND** vicepresident@vaherpsociety.com

3) Canebrake Rattlesnake Blitz (Survey Opportunities)

Our Conservation Chair is teaming up with the Virginia Department of Game & Inland Fisheries (VDGIF) and the Department of Defense (DoD) to help survey for the state endangered Canebrake Rattlesnake in southeastern Virginia. There are plans for a one day, or weekend, intensive survey, likely in early May, to get some experienced VHS officers and members to come together to help find any individual rattlesnakes, along with experts from VDGIF and DoD. Plans also call for other opportunities for VHS members to help survey for rattlesnakes on other days, when the VDGIF and DoD experts may not be available, so the VHS members will be asked at these times to survey without any attempts to handle the animals, but to just try to get photographs with detailed documentation of the locations.

Stay tuned to the VHS website for more finalizations and details regarding these efforts and opportunities.

4) VHS Website Updates

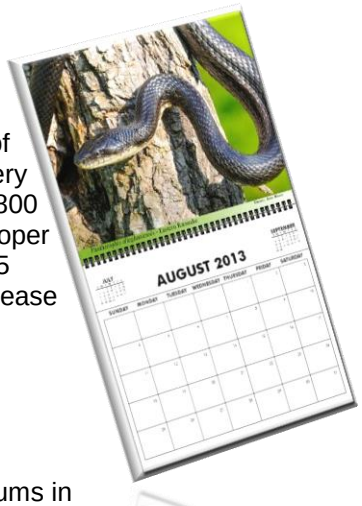
Check out the all new look of the VHS website! The VHS Webmaster has been working hard to update the look and functions of the website and it looks great!

Check out the recent action alert posted on the VHS home page. The Smithsonian Conservation Biology Institute is interested in any reports from citizens of any wood frog (Lithobates sylvaticus) die-offs found. Please report wood frog die-offs to Kim Terrell.

Also, be sure to check out the VHS Webmaster's hard work in putting together some pages for anyone to use to query native and naturalized reptile and amphibian species and where these species occur in Virginia. These are useful tools that anyone can use, and it includes data provided by the Virginia Department of Game & Inland Fisheries.
http://www.virginiaherpetologicalsociety.com/county/county-herps.htm

Keep checking the VHS website for more surveys and other events and updates coming up in 2014!

5) 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 31st 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. Good Luck Herp Photographers!

6) REMINDERS!

a. 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 a lot, 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 (Pages 15-16) to find out the latest news on some of these facilities!

b. 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 (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...ANYTHING...and a percentage of the order goes to support our cause!

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

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 percent 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. And if you download the GoodSearch – Virginia Herpetological Society (NEWPORT NEWS VA) toolbar, our cause will earn money every time you shop and search online - even if you forget to go to GoodShop or GoodSearch first! Add the Virginia Herpetological Society (NEWPORT NEWS VA) toolbar 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 high quality 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.

"The human race is challenged more than ever before to demonstrate our mastery – not over nature but of ourselves." ~ Rachel Carson

Events

	Northern Va Reptile Expo	Richmond Reptile Expo
Dates	5/3, 8/23/2014	7/19/2014
Location	Prince William County Fairgrounds Manassas, Virginia 20108	Richmond International Raceway Colonial Bldg, 602 E Laburnum Ave Richmond, VA 23322
Admission	$7 / $3 child	$8 / $3 child
Time	9 am to 3 pm	10 am to 3 pm
Contact	http://www.mdreptilefarm.com/shows/va/nva.asp	http://www.mdreptilefarm.com/shows/va/richmond.asp

	Fredericksburg Reptile Expo	Hampton Roads Reptile Expo
Dates	3/8/2014	3/2/2014
Location	Fredericksburg Fairgrounds 2400 Airport Road Fredericksburg, VA 22401	Point Plaza Suite 950 J. Clyde Morris Blvd. Newport News, VA 23601
Admission	$8	$7 /free child (under 3)
Time	9 am to 3 pm	9 am to 4 pm
Contact	http://mdreptilefarm.com/fredricksburg-reptile-expo/	https://www.facebook.com/Hrrexpo

For these and other reptile expos/shows, go to: http://www.rexpotracker.com/

Events (Continued)

LOUDOUN WILDLIFE CONSERVANCY
PROGRAMS and FIELD TRIPS

Vanishing Vernal Pools and the Amphibians That Use Them — Class March 14, 6:00 – 8:30 p.m., Morven Park, followed by Field Session March 15 or 16, 9:00 a.m. – 4:00 p.m. Join Loudoun Wildlife Conservancy for this popular crash course on vernal pools and other seasonal wetlands. This hands-on training begins with a classroom session on Friday evening followed by a full-day field session on the weekend (participants pick either Saturday or Sunday for their field trip). During the field session, we will visit different local vernal pool habitats, encounter amphibians that may include spotted and Jefferson salamanders and wood frogs, and search for fairy shrimp. Cost: $10 members, $20 non-members. Registration required: Sign Up Online at http://www.loudounwildlife.org/SignUp.htm.. Questions: Contact Jill Miller at *jmiller@loudounwildlife.org*.

Discovering the Wildlife and Habitats of Willowsford — Saturday, March 22, 10:00 a.m. Willowsford is a new community in eastern Loudoun where natural areas are being preserved and protected. Join **Loudoun Wildlife Conservancy** as we explore the woods and fields, identify birds, look for frogs and salamanders in the vernal pools and other wetlands, identify animal tracks and talk about the relationships between these varied habitats and wildlife residents. Please bring binoculars if you have them. This is a family-friendly event. Space is limited so please register early. ***Registration required:*** ***Sign Up Online*** *or contact Nicole Hamilton at nhamilton@loudounwildlife.org.*

Native Plant Sale — Saturday, April 5, 9:00 a.m. – 4:00 p.m., Morven Park. It's time again for **Loudoun Wildlife Conservancy**'s Spring Native Plant Sale! Native plants are beautiful and grow better because they are adapted for our weather conditions and soils; they also provide greater benefit to our native wildlife because plants and animals evolved together. Hill House Farm and Native Nursery (www.hillhousenativeplants.com) and Nature-By-Design (www.nature-by-design.com) will once again bring a wide variety of plants for you to select from. To see plants that each nursery carries or to place orders ahead of time (all nursery stock is not present at the sale), visit their websites. ***Questions:*** *Contact Ann Garvey at agarvey@loudounwildlife.org.*

Morven Park Nature Walk — Sunday, April 6, 1:00 – 4:00 p.m. Join Loudoun Wildlife Conservancy naturalists for a nature walk through the forest as we visit wooded wetlands, look for spring wildflowers and discuss the flora and fauna that make up this forest. If you own binoculars, please bring them. Registration required: Sign Up Online at http://www.loudounwildlife.org/SignUp.htm.. Questions: Contact Jill Miller at *jmiller@loudounwildlife.org*.

For up-to-date information on these programs and more, and to sign up, check our web site at www.loudounwildlife.org.

Herp Trivia

The questions and answers in this edition of "Herp Trivia" are pulled from material that has been posted on the VHS Facebook Page in recent months. Check out the vast information that is being posted on our Facebook Page!

1. Can you name this Virginia herp? Do you know its record length?

2. The Nature Center at Maymont in Richmond recently opened an exhibit featuring what Virginia herps?

3. Can you correctly identify all ten native Virginia herps?

4. Can you identify the native herp skeleton?

5. Of jumping distances of the American Bullfrog (*Lithobates catesbeianus*), what is the world record jump, and what is the longest jump recorded in scientific literature?

6. Can you correctly identify all six native Virginia reptiles?

7. True or False: Public education is a huge component of the core functions of VHS.

8. In Virginia, which native snake species have reached or exceeded 7 feet in total body length? Which species have reached or exceeded 8 feet in total body length ?

9. Can you correctly identify all nine Virginia native snakes?

10. Do any of our native snakes prey on turkey? If so, which one(s)?

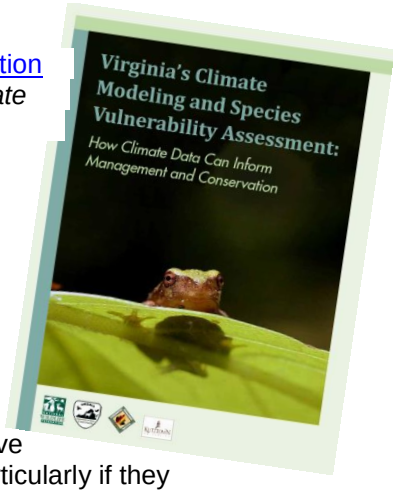
Answers can be found on pages 24-25.

NOTICE: Submissions for Catesbeiana Vol. 34 No. 2 are due Sept. 1, 2014!
Please support the VHS by submitting any papers, field notes, or artwork for *Catesbeiana* to: Dr. Paul Sattler, Editor, *Catesbeiana,* pwsattle@liberty.edu.

News

New report from the National Wildlife Federation (1
Hatchling lizards smarter than you think (2
Happy 2014 Year of the Salamander! From PARC 3)
Reptile group sues to overturn python ban – US calls ban necessary to protect wildlife 4)
Salamanders help predict health of forest ecosystems, inform forest management 5)

1) New Report from the National Wildlife Federation



The National Wildlife Federation is excited to announce the release of a publication titled *Virginia's Climate Modeling and Species Vulnerability Assessment: How Climate Data Can Inform Management and Conservation*.

This report analyzed how a selection of species (wildlife, fish, and plants) may change their distribution across a landscape based on climate change. The report summarizes species projections and what that may mean for conservation and management in Virginia.

A companion report by the Conservation Management Institute focuses on the technical aspects of the effort.

2) Hatchling lizards are smarter than you think

October 21, 2013, Macquarie University Press Release.

A collaborative research team from Macquarie University and Sydney University have discovered that young (hatchling) lizards are capable of learning complex tasks, particularly if they hatched from eggs incubated at warmer temperatures.

The team, lead by Associate Professor Martin Whiting from Macquarie University's Lizard Lab, tested the intellectual abilities of 14 week-old three-lined skinks by challenging them to first remove a cap covering a 'well' to access a food-reward, and secondly to correctly identify which coloured cap shields the food-reward.

"In the final stage of the testing, we complicated the challenge for the lizards by switching the reward to a different container, with a different coloured lid," said Associate Professor Whiting.

"We found that the lizards did not rely on previous spatial locations to locate the reward, but could discriminate between the colours to identify where to look first.

"Some of the lizards we tested never really got it, but others solved every challenge we threw at them. Our results add to a growing body of literature that shows that at least sometimes, lizards can be far smarter than many scientists previously believed."
A key element of the study was to compare the learning rates and abilities of lizards that had been incubated in warmer compared to cooler temperatures, with the former performing more successfully overall.
"The lizards from the 'hot' incubation temperatures were generally larger, but even the largest 'cold' incubated hatchlings did not progress beyond the training phase. Therefore, success at the motor task was due to more than just body size," said Whiting.
"It looks like the temperature of a nest influences the problem-solving ability of a young lizard. These results are significant because they underlie the importance of an animals developmental environment on learning ability and cognition."
The research paper has been published in full online in the journal Behavioral Ecology and Sociobiology.

Benjamin F. Clark, Joshua J. Amiel, Richard Shine, Daniel W. A. Noble & Martin J. Whiting (2013) Colour discrimination and associative learning in hatchling lizards incubated at 'hot' and 'cold' temperatures Behavioral Ecology and Sociobiology http://link.springer.com/article/10.1007%2Fs00265-013-1639-x

3) Happy 2014 Year of the Salamander! From PARC

Partners in Amphibian and Reptile Conservation (PARC), is celebrating 2014 as the Year of the Salamander to energize salamander education, research, and conservation. This is a worldwide effort, leveraged through the actions of numerous partner organizations and individuals – from the general public to professional wildlife conservation. Please check out our Year of the Salamander website at www.yearofthesalamander.org!

As the Year of the Salamander unfolds, PARC and its collaborators will be working to raise awareness about:

- the importance of salamanders in natural systems and to humankind;
- diverse ongoing research pathways aimed at better understanding salamanders, their role in ecosystems, and threats to their existence;
- actions being implemented around the world to conserve salamander populations and their habitats; and
- education and outreach efforts through a kaleidoscope of individual and group involvement.

- At our website, you can view or download the State of the Salamander document, the January newsletter and the January downloadable salamander calendar, which features the winning monthly photo contest image of a beautiful Long-tailed Salamander by Andrew Burmester! A page dedicated to Year of the Salamander outreach and education activities and links to other resources will be added soon. We'll continue to have newsletters and downloadable monthly calendars each month in 2014, so be sure to check back. Sign up to receive the monthly newsletter by mail by contacting us at yearofthesalamander@gmail.com.

- Become a Year of the Salamander partner! If you or your organization are implementing salamander conservation efforts or just plain love salamanders and want to help spread the word, we want to hear about it at yearofthesalamander@gmail.com! Check out our Partners Page - we'll be adding more throughout the year!

- Don't forget to get your Year of the Salamander 2014 gear at the PARCStore (http://www.cafepress.com/parcstore). The merchandise features the Year of the Salamander winning logo (designed by Sheri Sanders) and a 2014 print wall calendar (chock full of amazing photos).

- Like us on Facebook! Follow us on Twitter! Participate in our ongoing monthly photo contest for a chance at having your photo selected for our month-by-month downloadable calendar, or just share your photos with us at yearofthesalamander@gmail.com – you might see your photo in one of our many conservation products!

- Thanks, and be sure to spread the word!

4) Reptile group sues to overturn python ban – US calls ban necessary to protect wildlife

By David Fleshler, Sun Sentinel, December 19, 2013

A reptile industry trade group has gone to court to overturn a federal ban on the import of four species of large snake, including the Burmese pythons that have infested the Everglades.

The United States Association of Reptile Keepers, which represents dealers, importers, breeders and hobbyists, filed suit in federal court Thursday to overturn a 2012 ban on the import and interstate trade in Burmese pythons, northern and southern African pythons and yellow anacondas.

The group said the federal ban rested on shaky scientific evidence, including a highly exaggerated projection of the snakes' potential geographic range in the United States, and inadequate economic analysis that understated the potential harm to the reptile industry. "This is a powerful day for the Reptile Nation, as we fight to protect your rights to pursue your passion and defend your businesses against unwarranted and unnecessary government intrusion," stated an email Friday to members of the reptile group.

The U.S. Fish and Wildlife Service banned the import and interstate trade in the snakes on Jan. 17, 2012, with then Interior Secretary Ken Salazar traveling to Everglades National Park to make the announcement. Biologists at the park have called the python a major threat to native wildlife, with the huge snakes consuming rabbits, birds, raccoons, alligators and full-grown deer. East of the park, African rock pythons are suspected of establishing a breeding population along Tamiami Trail.

Tom MacKenzie, spokesman for the U.S. Fish and Wildlife Service, said the ban was necessary to protect native wildlife. "Banning the import and interstate movement of these large, non-native snakes will help prevent spread of these snakes into wild populations beyond those already established," he said.

The Humane Society of the United States called the lawsuit an attempt to protect profits from the sale of dangerous animals that have killed 15 people in the United States. "This is the very industry that peddles high-maintenance dangerous predators to unqualified people at flea markets, swap meets, and over the Internet," said Debbie Leahy, captive wildlife specialist for the Humane Society. "Banning just a handful of dangerous species has little impact on businesses, since there are literally hundreds of less risky snake and reptile species available to pet purchasers."

But the reptile keepers group said the government ignored contrary evidence presented during the public comment period.

A ban on five other species of large constrictors is under review. These include the boa constrictor, which has established a breeding population in Miami-Dade County, the reticulated python, DeSchauensee's anaconda, green anaconda and Beni anaconda.

The reptile group, which said a ban on all nine species could cost the industry up to $1.2 billion over 10 years, said this lawsuit would "put the government on notice" that it intends to fight any additional bans.

5) Salamanders help predict health of forest ecosystems, inform forest management

January 22, 2014, University of Missouri-Columbia

Summary:

Researchers have determined that salamander population size reflects forest habitat quality and can predict how ecosystems recover from forest logging activity. They believe these findings can be translated to other species within forest ecosystems throughout the world.

Woodland salamanders are small, lungless amphibians that live in moist, forest habitats throughout the U.S. and the world. Salamanders often serve as vital links in forest food chains; their population size and recovery from major disturbances can help predict the health of forest ecosystems. Now, researchers at the University of Missouri have determined that salamander population size reflects forest habitat quality and can predict how ecosystems recover from forest logging activity. MU researchers believe these findings can be translated to other species within forest ecosystems throughout the world.

"One of our primary interests is in conservation of amphibians and the habitats that they utilize," said Ray Semlitsch, Curators' Professor of biological sciences in the College of Arts and Science at MU. "We are trying to understand how land use, and particularly forest management, affects the survival of amphibians on the landscape. We also determined that salamander recovery -- or the amount of time it takes for salamanders to repopulate a cut forest area -- can help forest managers determine appropriate logging schedules."

Semlitsch and fellow researcher, Grant Connette, a graduate student in the Division of Biological Sciences, chose to study a forest area in the southern Appalachian Mountains that has the highest diversity of salamanders in the world. Although seldom seen in the daytime, these animals breathe using their wet skin and forage at night. The researchers conducted surveys of terrestrial salamanders, which don't rely on water or streams, to examine patterns of their abundance relative to timber harvest and species movement behavior. They discovered that forests logged more than 100 years ago may still be affecting salamanders today.

"Most conservation biologists study the pattern of change within a species -- for example, how they decline or how they recolonize after a major event," Semlitsch said. "Our lab takes it a step further by seeking to understand the causes of species decline. We're finding that population fluctuations depend on the animal's behavior, like their ability to disperse, following a major event like logging a forest and can last for many years."

Roughly half of all forest area in the United States is on public land, where modern forest management increasingly uses alternatives to clear-cutting. These techniques include limiting the size of logged areas and maintaining large areas of forest at highly mature stages, which may prove less disruptive to wildlife than clear-cutting. Semlitsch hopes to help find the balance between the economics of using natural resources and conservation and hopes to share this information with forest managers so they can make informed decisions about conservation and biodiversity.

Their research, "Life history as a predictor of salamander recovery rate from timber harvest in southern Appalachian forests, U.S.A." was published in Conservation Biology.

Story Source:

The above story is based on materials provided by University of Missouri-Columbia. Note: Materials may be edited for content and length.

Journal Reference:

GRANT M. CONNETTE, RAYMOND D. SEMLITSCH. Life History as a Predictor of Salamander Recovery Rate from Timber Harvest in Southern Appalachian Forests, U.S.A. Conservation Biology, 2013; 27 (6): 1399 DOI: 10.1111/cobi.12113

Zoo Updates

Reptiles Alive! **Northern Virginia & DC Area** **www.reptilesalive.com**

Things are going well, and our summer schedule is filling up with public events. Here is a list of public events currently booked in our schedule in VA (lots more will be coming). All these events are OPEN to the general public. Some require pre-registration and/or tickets. The list below and several other events found on the following link include numerous free public events and include many at Fairfax libraries as well as other events **http://reptilesalive.com/events**

March 2014

Saturday March 22nd 12:00noon-12:45pm
Live Animal Show
"Reptiles Alive!"
Old Town Theater
Alexandria VA

April 2014

Tuesday April 15th 2:00pm-3:15pm
Live Animal Show
Reptiles Alive! + Reptile Encounters
George Mason Regional Library
Annandale VA
703 256-3800

Saturday April 26th 10:30am-11:30am
Live Animal Show
"Reptiles Alive + Reptile Encounters"
Henrico Theater
Henrico VA
(804) 328-4491

Saturday April 26th 11:30am-12:30pm
Live Animal Show
"Reptiles Alive + Reptile Encounters"
Henrico Theater
Henrico VA
(804) 328-4491

July 2014

Wednesday July 9th 4:00pm-5:15pm
Live Animal Show
"Reptiles Alive! + Reptile Encounters"
Alexandria Library
Alexandria VA

Tuesday July 15th 10:30am-11:30am
Live Animal Show
"Reptiles Alive + Reptile Encounters"
Chinn Park Regional Library
Woodbridge VA

703-792-4800

Tuesday July 15th 2:00pm-3:15pm
Live Animal Show
"Reptiles Alive + Reptile Encounters"
Chinn Park Regional Library
Woodbridge VA
703-792-4800

Tuesday July 15th 7:00pm-8:15pm
Live Animal Show
"Reptiles Alive + Reptile Encounters"
Chinn Park Regional Library
Woodbridge VA
703-792-4800

Tuesday July 22nd 12:00-1:00pm
Live Animal Show
"Reptiles Alive! + Reptile Encounters"
Richmond County Public Library
Warsaw VA
804 333-6710

Tuesday July 22nd 1:00pm-1:30 pm
Live Animal Show
"Reptiles Alive!"
Richmond County Public Library
Warsaw VA
804 333-6710

Tuesday July 22nd 3:00pm-3:45pm
Live Animal Show
Snakes Alive!
Locust Grove Middle School
Locust Grove, VA
540 672-3811

Wednesday July 23rd 1:00pm-1:45pm
Live Animal Show
Snakes Alive!
Gordon-Barbour Elementary School
Gordonsville VA
540 672-3811

Wednesday July 23rd 3:15pm-4:00pm
Live Animal Show
Snakes Alive!
Taylor Admin Building
Orange VA
540 672-3811

Saturday July 26th 12:30pm-1:30pm
Live Animal Show
Reptiles Alive! + Reptile Encounters

Rappahannock County Library
Washington VA
540 675-1125

Monday July 28th 2:30pm-3:15pm
Live Animal Show
"Reptiles Alive! "
Cascades Library
Potomac Falls VA
703-444-3228

Monday July 28th 7:00pm-7:45pm
Live Animal Show
"Reptiles Alive! "
Ashburn Library
Ashburn VA
703-737-8100

Tuesday July 29th 10:30pm-11:15pm
Live Animal Show
"Reptiles Alive! "
Middleburg Library
Middleburg VA
540-687-5730

Tuesday July 29th 2:00pm-2:45pm
Live Animal Show
"Reptiles Alive! "
Rust Library
Leesburg VA
703-777-0323

Tuesday July 29th 4:30pm-5:15pm
Live Animal Show
"Reptiles Alive! "
Lovettsville Library
Lovettsville VA
540-822-5824

Wednesday July 30th 1:00pm-1:45pm
Live Animal Show
"Reptiles Alive! "
Purcellville Library
Purcellville VA
540-338-7235

Remember, VHS Members receive a discount when booking shows.
– Caroline Seitz

Virginia Aquarium **Virginia Beach** **virginiaaquarium.com**

An Update of the Virginia Aquarium & Marine Science Center :

Here at the Virginia Aquarium, we are excited about our present situation, and the future ahead! Currently, we have been working furiously to set up the very best enclosures for our Javan Hump-headed lizards (*Gonocephalus chamaeleontinus*). Some of you may have read in the December 2013 edition of Reptiles Magazine that Virginia Aquarium houses the largest collection of these rare animals in the country. We are very proud of this fact, and will continue to establish a breeding colony. For the first time, we have several babies. They are doing well and growing quickly.

Baby Gonocephalus chamaeleontinus

Jude's ultrasound, with Stephen Knoop (right)

After an unsuccessful attempt to breed our Komodo dragon female Jude, to our male Teman, this past November, we are already ramping up to attempt the process again this coming summer or early fall. We hope to increase Jude's weight by the time breeding season rolls around again. We have implemented successful tactile training into Jude's routine and as a result, have been successful in obtaining ultrasounds on a regular basis. We hope to add to the limited knowledge of Komodo dragon reproduction in zoos and aquariums by creating a time-lapse of follicular development.

Our rare Malayan Leaf Frogs (*Megophrys nasuta*) are doing quite well thanks to their recently renovated exhibit. These interesting and unique animals can be found across from the Tomistoma exhibit in our Restless Planet section of the Ocean Pavilion. Unfortunately, by pure coincidence, all of our acquired Malayn Leaf Frogs happen to be males. Because we intend to be a taxon champion of this species, we are happy to announce that we will be acquiring at least a dozen more of these beautiful animals this coming spring. Our hope is to have our own sustainable population, and introduce new genes into the presently small gene pool.

Megophrys nasuta

The Virginia Aquarium Herpetology staff is proud to be heading up its own chapter of FrogWatch USA. This is our second year contributing to the national citizen-science program. Last year was a great success and we hope to have an even bigger contribution in 2014. If you live in the Hampton Roads area interested in volunteering your time to this worth-while conservation initiative, please contact us. Training sessions will be on February 22nd, and March 1st from 2-5pm at Virginia Aquarium Marsh Pavilion. If you would like any extra information, please contact Stephen Knoop at sjknoop@virginiaaquarium.com.Thank you to the Virginia Herpetological Society, and we hope to see you soon at the Virginia Aquarium & Marine Science Center!

	~Stephen Howard *Exhibit Technician I - Herpetology* *Virginia Aquarium and Marine Science Center*

"There are no words that can tell the hidden spirit of wilderness, that can reveal its mystery, its melancholy and its charm."
~ Theodore Roosevelt

Conservation Key

TURTLEPOP: A collaborative effort for the conservation of pond turtles

Dr. Todd Fredericksen, Ferrum College

Aquatic turtles can often be observed basking on logs at the water's edge or rising to the surface of the water for air. They are quick to slide under the water upon the least sign of danger. Except perhaps for water pollution and occasional trapping, they are usually safe in their watery habitat. The trouble starts, however, when they venture away from the water. While both males and females may occasionally leave the water, adult females consistently leave the water each year to nest on land. When traveling to and from the nesting site, turtles are subject to the same threats as their terrestrial counterpart, the Eastern Box Turtle (*Terrapene carolina*). These threats include motor vehicles, lawn mowers, and pet collectors. Indeed, populations of aquatic turtles all over the world are often threatened because they are collected for food and subject to mortality from human disturbance (Buhlmann et al., 2009). Hatchling turtles also need to find their way to water and are additionally subjected to hungry synanthropic predators, such as raccoons, opossums, and crows. Conceivably, mortality of pond turtles should increase with increasing levels of urbanization surrounding the pond (Marchand and Litivaitis, 2004). This potentially increased mortality for females and young turtles may lead to biased population structures toward adult males. Indeed, skewed sex and age ratios have been observed in freshwater turtle species (Steen and Gibbs, 2004; Freedberg and Bowne, 2006).

Beginning in 2012, students and professors at colleges and universities throughout the country started working collaboratively on a mark-recapture study to test the hypothesis that increased urbanization is correlated with aquatic turtle population age structures that are biased towards adult males. The project entitled "Population Structure of Freshwater Turtles along an Urbanization Gradient", nicknamed "Turtlepop", is part of a network of collaborative ecological research projects funded by the National Science Foundation called the Ecological Research as Education Network (EREN). The goal of EREN is to engage

Ferrum students, Tyler Muckle & Anthony Garcia, check a turtle trap at Chapman Pond.

undergraduate students in authentic research as part of a class project or independent research. Dr. David Bowne of Elizabethtown College in Pennsylvania coordinates Turtlepop and there are professors from four colleges in Virginia participating in the study, including Dr. Randy Chambers at The College of William and Mary, Dr. Greg Eaton at Lynchburg College, Dr. Todd Fredericksen at Ferrum College, and Dr. Peter Smallwood at The University of Richmond.

In the late summer and fall, students and professors capture turtles in large mesh funnel net traps baited with sardines. Students record data on the size, gender and age of the turtle and then mark the turtles using a standardized technique by notching the marginal scutes of the carapace that gives each turtle a unique identification code. At least one pond is sampled at each college or university and all researchers use two different sampling periods per pond, with each sampling period consisting of two consecutive days using a minimum of four funnel traps. To relate the population to structure, data were also collected on landscape features surrounding the pond including area of land use, density of the road network, and human population size within different distances from the pond. The data are analyzed using a Geographic Information System (GIS).

At the University of Richmond, turtles were trapped in five ponds during 2013 and six species were captured including the Painted Turtle (*Chysemys picta*), Eastern Musk Turtle (*Sternotherus odoratus*), Common Snapping Turtle (*Chelydra serpentina*), River Cooter (*Pseudemys concinna*), Red-bellied Cooter (*Pseudemys rubriventris*), and the exotic Red-eared Slider (*Trachemys scripta elegans*). At Westhampton Lake in the center of campus, Painted turtles had a male-female ratio of 1:1.2

Ferrum student, Alison Davis, setting a turtle trap at Chapman Pond.

and a similar adult-juvenile ratio. Eastern musk turtles appeared to be skewed towards females (1:3.5) and adults (3.5:1). Red-bellied Sliders were not marked, but totaled 31 captures, second only to Painted Turtles. In the more rural Rice Lake, only Eastern Musk Turtles were captured in significant numbers and populations were skewed heavily towards females (1:4.4) and adults (2.7:1). A third lake, Swan Lake, had an abundant population of Red-eared Sliders, comprising 29 of the 42 turtle captures.

At Ferrum College, trapping was completed at two ponds during 2012 and 2013. Adams Lake (actually a medium-sized pond), located in the center of campus has an abundance of Snapping Turtles and Painted Turtles. The Snapping Turtle population was biased towards males (2.6:1) and heavily biased towards adults (17:1). Painted Turtles had a relatively even sex ratio (1:1.2), but was also biased towards adults (3.67:1). Chapman Pond is a slightly smaller water body located on the edge of campus and mostly surrounded by forest. Most captures were Painted Turtles, again with an even sex ratio (1.2:1) and skewed towards adults (2.25:1). There were only four Snapping Turtles captured, three males and one juvenile of undetermined sex. In each pond, one Eastern Musk Turtle was captured.

At the College of William and Mary, students in the Fall 2012 and 2013 Wetland Ecosystems class participated in two days of turtle sampling in

An eastern painted turtle being measured at Chapman Pond.

Crim Dell, a small, ~1/4-acre pond located in the center of campus. Relative to Ferrum and Richmond, few turtles were captured in Crim Dell (14 total unique captures), although six different species were represented, including Red-bellied Cooter (4), Red-eared Slider (4), Common Snapping Turtle (2), Eastern Musk Turtle (2), Yellow-Bellied Slider (*Trachemys scripta scripta*) (1), and Painted Turtle (1). Two turtles were recaptured during the second sampling day in 2012; no turtles from either year were recaptured in 2013. The snapping turtles were released

without any measurement. All other species captured collectively were biased toward adults (11:1), with 7 male and 5 female captures.

Overall, the most commonly captured species, the Painted Turtle, had a relatively even sex ratio at all ponds, whereas Eastern Musk Turtles tended to have a female-skewed population and Common Snapping Turtles had a male-skewed population. The only consistent trend among all species is a skewed ratio of adults to juveniles. It is unclear whether this trend is due to problems with recruitment or perhaps a capture method bias where juvenile turtles may have less difficulty in escaping traps through the narrow funnel opening. There is a wide variety in age distribution among species and among published records within a species. The expected 1:1 for adults is based on solid evolutionary theory, but the expected juvenile:adult is much softer. Both Ernst (1971) and Bayless (1975) found juvenile:adult ratios of less than 1:5 in less human-dominated systems.

In the coming months, large amounts of data will be submitted throughout the nation on the population structure of pond turtles and the impact of urbanization. In addition, professors and students have gained experience in sampling aquatic turtle populations with the expectation of continued monitoring of these populations in relation to human disturbance.

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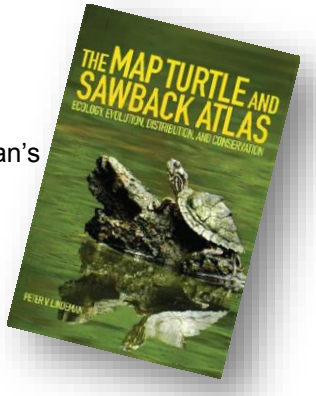
New Book

Title: **The Map Turtle and Sawback Atlas: Ecology, Evolution, Distribution, and Conservation**
Author: Peter V. Lindeman
Publisher: University of Oklahoma Press
Publication date: December 2013
Price: $45.00 PLUS $7.00 S&H (through HerpDigest) OR $35.95 - $47.73 (through Amazon.com)



Description: Covering all facets of the biology of a little-known genus, Peter V. Lindeman's lavishly illustrated *Map Turtle and Sawback Atlas* is both a scientific treatise and an engaging introduction to a striking group of turtles.

Map turtles and sawbacks, found in and along rivers from Texas to Florida and north to the Great Lakes, fascinate ecologists and evolutionary biologists. Over a short geologic time span, these turtles achieved exceptional biological diversification. Their diets are also exceptionally diverse, and a significant difference in size distinguishes males from

females. Adult males are typically half or less the shell length of adult females, making map turtles and sawbacks the champions of sexual dimorphism among not only turtles but all four-legged vertebrates.

Aesthetics also draw biologists and hobbyists to map turtles and sawbacks. While the male Sabine map turtle may look to some like a "pencil-necked geek," as the author puts it, markings on the shell, limbs, head, and neck make map turtles among the most attractive turtles on earth. Sawbacks feature a striking ridge down their shell. Few turtles show themselves off to such advantage. Photographs included here of *Graptemys* basking poses reveal to what improbable heights these turtles can scale, the spread-eagle sunning stances they adopt, the stacking of individuals on a crowded site, and the heads that warily watch the world above the waterline.

In lively prose, Lindeman details the habitat, diet, reproduction and life history, natural history, and population abundance of each species. A section on conservation status summarizes official state, federal, and international designations for each species, along with efforts toward population management and recovery as well as habitat preservation. The author also outlines promising avenues for future research, ranging from the effects of global climate change on populations to strategies for combating expansion of the pet trade. Hardcover. 488 pages. ISBN: 9780806144061.

Virginia Literature

These selections represent articles published or in press during the period September to December 2013 and January 2014. 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 by Susan Watson.

Keitzer, S. Conor, Thomas K. Pauley, and Chris L. Burcher. Oct 2013. Stream Characteristics Associated with Site Occupancy by the Eastern Hellbender, *Cryptobranchus alleganiensis alleganiensis*, in Southern West Virginia. Northeastern Naturalist. Vol. 20(4): 666-677.

Mitchell, Joseph C. and Susan C. Walls. Dec 2013. Nest Site Selection by Diamond-Backed Terrapins (*Malaclemys terrapin*) on a Mid-Atlantic Barrier Island. Chelonian Conservation and Biology. Vol. 12(2): 303-308.

Farnsworth, Elizabeth J., Miyoko Chu, W. John Kress, Amanda K. Neill, Jason H. Best, John Pickering, Robert D. Stevenson, Gregory W. Courtney, John K. Vandyk and Aaron M. Ellison. Nov 2013. Next-Generation Field Guides. BioScience. Vol. 63(11): 891-899.

McCulloch, Eve S. Harnessing the Power of Big Data in Biological Research**.** BioScience. Vol. 63(9): 715-716.

Drake, Dana L. and Katherine M. O'Donnell. Jan 2014. Sampling of Terrestrial Salamanders Reveals Previously Unreported Atypical Color Morphs in the Southern Red-backed Salamander *Plethodon serratus*. The American Midland Naturalist. Vol. 171(1): 172-177.

Camp, Carlos D., Zackary L. Seymour, and Jessica A. Wooten. Sept 2013. Morphological Variation in the Cryptic Species *Desmognathus quadramaculatus* (Black-bellied Salamander) and *Desmognathus folkertsi* (Dwarf Black-bellied Salamander). Journal of Herpetology. Vol. 47(3): 471-479.

Acord, Megan A., Carl D. Anthony, and Cari-Ann M. Hickerson. Dec 2013. Assortative Mating in a Polymorphic Salamander. Copeia. Vol. 2013(4): 676-683.

Graham, Sean P. Sept 2013. How Frequently Do Cottonmouths (*Agkistrodon piscivorus*) Bask in Trees? Journal of Herpetology. Vol. 47(3): 428-431.

Lovich, Jeffrey E. Sept 2013. Turtles, Tortoises and Terrapins: A Natural History. Copeia. Vol. 2013(3): 570-571.

Cunningham, Heather R. and Leslie J. Rissler. Sept 2013. Investigating Behavioral Shifts in Aggression between a Naturalized and Native Salamander Species of the Genus *Plethodon*. Herpetological Conservation and Biology. Vol. 8(2): 276-287.

Allender, Matthew C., Mark A. Mitchell, David McRuer, Shane Christian, and John Byrd. Sept 2013. Prevalence, Clinical Signs, and Natural History Characteristics of Frog Virus 3-like Infections in Eastern Box Turtles (*Terrapene carolina carolina*). Herpetological Conservation and Biology. Vol. 8(2): 308-320.

Minter, Larry J., Daniel S. Dombrowski, Michael K. Stoskopf, Cheryl A. Purnell, Micheal R. Loomis, and Ryan S. De Voe. Sept 2013. Hematology and Plasma Biochemical Values for Free Ranging Cottonmouths (*Agkistrodon piscivorus*) in Central North Carolina, USA. Herpetological Conservation and Biology. Vol. 8(2): 321-334.

Waye, Heather L. Sept 2013. Can a Tiger Change its Spots? A Test of the Stability of Spot Patterns for Identification of Individual Tiger Salamanders (Ambystoma tigrinum). Herpetological Conservation and Biology. Vol. 8(2): 419-425.

Herpcetera

CNAH launches The Journal of North American Herpetology (1

6th Conference on the Biology of Plethodontid Salamanders 2)

1) The Center for North American Herpetology (CNAH) is pleased and proud to announce the launch of our journal – The Journal of North American Herpetology. The Journal of North American Herpetology (JNAH) (ISSN 2333-0694)

JNAH provides an open access on-line venue with the use of all modern digital technologies for peer-reviewed contributions of all aspects of North American Herpetology within the geographic boundaries of the United States and Canada. JNAH is a continuation of the very first herpetological on-line peer reviewed Journal Contemporary Herpetology (1998-2009), which can be accessed from the JNAH web site.

Co-editors and CNAH Board Members Walter Meshaka and Dan Fogell along with Managing Editor and CNAH Director Travis Taggart have worked diligently over the past year preparing this new journal. They would like to extend their sincerest gratitude to all of the Associate Editors, reviewers, and authors who helped them craft what they believe is a high-quality, professional publication dedicated to furthering the understanding of the North American herpetofauna. JNAH will continue to publish manuscripts in this volume throughout 2014 as they are received, reviewed, and readied for publication. Subsequent announcements will be released each time an article is prepared for publication.

The premiere issue, Volume 2014(1), can be accessed by visiting the JNAH web site at http://jnah.cnah.org.

2) 6th Conference on the Biology of Plethodontid Salamanders, May 18-20 2014 in Tulsa, OK

It has been nearly seven years since the most recent "plethodontid conference." Therefore, we are pleased to announce the 6th Conference on the Biology of Plethodontid Salamanders! The 6th conference will honor our friend and colleague Dr. Stephen Tilley, Professor Emeritus at Smith College. We will convene at the University of Tulsa in Tulsa, Oklahoma on May 18-20, 2014.

We anticipate space for ~40 oral presentations. For those who cannot be accommodated on the oral presentation schedule, and for those wishing to present in poster format, we will offer a poster session during the conference. Registration fees for this conference are $50 for students and $100 for faculty, postdocs, and others. Conference registration and payment of fees can be accomplished through a secured website. Abstract submission will be accomplished via email.

The deadline for registration and for submission of abstracts is February 15, 2014. All information about this conference including registration and abstract submission instructions, lodging, information about our honoree, etc. can be found at the conference website: http://plethodontids2014.weebly.com.

Details and announcements will be posted to this website and additionally through the conference Twitter feed plethodontids14. Be sure to follow us! We look forward to seeing everyone in Tulsa!

Please address all questions to one of the conference organizers:

Matt Gifford
Department of Biology
University of Arkansas at Little Rock
Little Rock, AR 72204
megifford@ualr.edu

Ron Bonett
Department of Biological Science
University of Tulsa
Tulsa, OK 74104
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Answers from pages 8-10.

Trivia Answers

1. Can you name this Virginia herp? Do you know its record length?
   - **The answers are eastern hellbender (*Cryptobranchus alleganiensis alleganiensis*) and 29.1 inches (74 cm).**

2. The Nature Center at Maymont in Richmond recently opened an exhibit featuring what Virginia herps?
   - **The three venomous snake species that are native to Virginia (northern copperhead, eastern cottonmouth, and timber rattlesnake).**

3. Can you correctly identify all ten native Virginia herps?
   - **1. Pickerel Frog (*Lithobates palustris*)**
   - **2. Southern Leopard Frog (*Lithobates sphenocephalus utricularius*)**
   - **3. Eastern Cottonmouth (*Agkistrodon piscivorus piscivorus*)**
   - **4. Red Cornsnake (*Pantherophis guttatus*)**
   - **5. Carpenter Frog (*Lithobates virgatipes*)**
   - **6. Northern Watersnake (*Nerodia sipedon sipedon*)**
   - **7. Northern Ring-necked Snake (or intergrade) (*Diadophis punctatus edwardsii*)**
   - **8. Eastern Red-backed Salamander (*Plethodon cinereus*)**
   - **9. Northern Brownsnake (*Nerodia taxispilota*)**
   - **10. Spotted Salamander (*Ambystoma maculatum*)**

4. Can you identify the native herp skeleton?
   - **Eastern Spiny Softshell (*Apalone spinifera spinifera*)**

5. Of jumping distances of the American Bullfrog (*Lithobates catesbeianus*), what is the world record jump, and what is the longest jump recorded in scientific literature?
   - **7.2 feet and 4.2 feet, respectively**

6. Can you correctly identify all six native Virginia reptiles?
   - **1. Northern Copperhead (*Agkistrodon contortrix mokasen*)**
     2. Eastern Spiny Softshell (*Apalone spinifera spinifera*)
     3. Loggerhead Sea Turtle (*Caretta caretta*)
     4. Eastern Six-lined Racerunner (*Aspidoscelis sexlineata sexlineata*)
     5. Eastern Cottonmouth (*Agkistrodon piscivorus piscivorus*)
     6. Snapping Turtle (*Chelydra serpentina*)

7. True or False: Public education is a huge component of the core functions of VHS.
   - **The answer is true. Check out the VHS Education Committee webpage and report: http://www.virginiaherpetologicalsociety.com/education/educationalcommittee.htm**

8. In Virginia, which native snake species have reached or exceeded 7 feet in total body length? Which species have reached or exceeded 8 feet in total body length?
   - **To date, in Virginia, none of our native snakes have reached the 8 or even 7 foot mark. The longest wild, native snake ever measured in Virginia was an Eastern Ratsnake (*Pantherophis alleghanensis*) that measured 6 feet, 7 inches. In Virginia, the Eastern Ratsnake is the only snake to reach 6 feet.**

9. Can you correctly identify all nine Virginia native snakes?
   1. **Juvenile Northern Black Racer (*Coluber constrictor constrictor*)**
   2. **Eastern Wormsnake (*Carphophis amoenus amoenus*)**
   3. **Common Ribbonsnake (*Thamnophis sauritus sauritus*)**
   4. **Northern Red-bellied Snake (*Storeria occipitomaculata occipitomaculata*)**
   5. **Scarlet Kingsnake (*Lampropeltis elapsoides*)**
   6. **Northern Brownsnake (*Storeria dekayi dekayi*)**
   7. **Queensnake (*Regina septemvittata*)**
   8. **Eastern Gartersnake (*Thamnophis sirtalis sirtalis*)**
   9. **Northern Ring-necked Snake (*Diadophis punctatus edwardsii*)**

10. Do any of our native snakes pray on turkey? If so, which one(s)?
    - **The only two native Virginia snake species that have been documented as preying upon turkey are the northern pinesnake (*Pituophis melanoleucus melanoleucus*) and the timber rattlesnake (*Crotalus horridus*).**

Send ideas for Herp Trivia to newsletter editor, Susan Watson, newsletter@vaherpsociety.com.

Virginia Native

The purpose of **Virginia Native** is to highlight native species that deserve recognition. Additional information can be found on the website of the Virginia Department of Game and Inland Fisheries (VDGIF). http://www.dgif.virginia.gov/wildlife/information.

Spotted Salamander (*Ambystoma maculatum*)

Spotted salamander metamorph & larva

Characteristics

This is a fairly large salamander that is gray or black with large, rounded, yellow or orange spots from the head through the tail. The belly is pale slate without spots or blotches. Adults reach a total length of 4.5-7.75 in (11.2-9.7 cm). The males are slightly slimmer than the females and in the breeding season they may be recognized by the protuberant vent. With first warm rains they breed in pools with egg masses up to 200. The eggs hatch in 30 to 55 days. During the summer and winter, adults live underground and in early spring they migrate at night to small woodland ponds to breed. The critical environmental factors affecting the timing of migration appear to be temperatures above freezing in conjunction with moisture provided either by snow or

Gravid female

Distribution

This salamander occurs statewide in Virginia, with the exception of the far southeastern portion of the coastal plain and the barrier islands. It inhabits bottomland forests and floodplains, but may also be found in upland forests with suitable breeding sites (semi-permanent pools about 1 m deep). These salamanders are fossorial during the nonbreeding season and migrate to ponds, streams, or pools to breed..

The canebrake rattlesnake inhabits hardwood and mixed hardwood-pine forests, cane fields, and the ridges and glades of swampy areas in localized areas of southeastern Virginia. It overwinters in the base of hollow trees or in stumps.

Foods

Larvae feed on zooplankton, but will also take aquatic insects, isopods, dragonfly larvae and other small aquatic invertebrates. Adults prey on a variety of terrestrial invertebrates including earthworms, mollusks, spiders, insects and even other salamanders.

Common Name: Spotted salamander

Scientific Name: *Ambystoma maculatum*

Genus: ***Amby*** is Greek for "a cup", ***stoma*** is Greek for "a mouth".

Species: ***maculatum*** is Latin for "spot" or "spotted".

Average Length: 4.4 – 7.8 in. (11.2 – 19.7 cm)

Record length: 9.8 in. (24.8 cm)

Spotted salamander egg mass