

# Virginia Master Naturalist

Southwestern Piedmont Chapter



## THE VINE



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### PRESIDENT'S MESSAGE

I can never get enough of spring! I savor every early bloom on the trees, shrubs, perennials and bulbs in my yard. I see red buds and white crabs blooming in the woods. The service berry and dogwoods are just starting to peek out. Yellow forsythia and daffodils brighten the yard, a pretty contrast to the blue bells and hyacinth.

The few really warm days between the rain and frosty mornings have been teasers of the summer to come. I have been enjoying watching the chickadee family that moved into a birdhouse I put up outside the bedroom window. Fence lizards are out, scampering away when I walk by. I even got bit by a mosquito already.

It is time to get outside!!! In April we will celebrate Earth Week and conduct our first Bio Blitz. Watch for news of project opportunities in Wilson Park, thanks to a job well done by the committee who submitted the Keep Virginia Green grant application! It is time to roll up our sleeves and get to work!

Kathy Fell

**Good News! Michelle Prysby, Virginia Master Naturalist Program Coordinator, has created the "Master Naturalist Volunteer Management System", the new state managed web site for Master Naturalists. Members will be able to manage their own contact information, view a chapter events calendar and log volunteer hours. Everything is not quite set up yet, but will be available soon. Also, visit the Southwestern Piedmont Chapter web page and look for the new links to our new public electronic Calendar of Events and our Chapter Newsletters!**  
Link: <http://www.virginiamasternaturalist.org/>

## Notes from a Walk among the Redwoods

I recently visited my son in Santa Cruz, California. When ever I visit, we always try to schedule time for a hike in the woods, amid the Coast Redwoods (*Sequoia Semper-virens*).

The Redwoods are magnificent. I never felt so small. *Semper virens* (always green) is an apt name for a species that can live to over 2000 years old. Trees can reach over 15 feet in diameter and over 350 feet tall. Their range is a narrow, 450 mile strip along the western coast of from central California to southern Oregon. Temperatures in this habitat are moderate all year and there is plenty of rain and mist. The pine cones seem very small, considering how massive the trees become. We saw a number of tree circles. When a redwood dies, new shoots spring up from the roots and create a circle of new trees around the site of the original tree. This extends the genetic life of a single tree beyond imagination.

We observed two other species on our hike that are only found in Redwood habitat: wood sorrel (*Oxalis oregana*) and the mascot of the University of California Santa Cruz, the banana slug. Somehow, "go slugs!" just seems wrong. It was my third walk through the Redwood forest, and I can't wait until my next chance to walk among these magnificent trees again.

Kathy Fell



Left, banana slug.



Right, Redwood pinecones.



Left, standing in a Redwood ring.

Right, wood sorrel (*Oxalis oregana*).



Photos submitted by  
Kathy Fell

**Graduation of 2010 Basic Training Class, Election of Chapter Officers  
& Presentation of Certificates of Achievement January 20, 2011**



**BASIC TRAINING CLASS**  
Attending the Graduation Ceremony are, left to right, Paul May, Patty May, Linda Drage, Mavis Rice, Caroline Pilson and Natalie Coleman. Graduates not pictured are Dannie LaPrad, Marion Miller, Teresa Prillaman and Samantha Smith.

**CERTIFIED MASTER NATURALISTS**  
From left to right, John Hollandsworth, Evalyn Chapman, Rachael Wingfield, Dorothy Haley, W.C. Fowlkes and Jesse Powell.



**PRESIDENT'S AWARD FOR MOST VOLUNTEER HOURS**  
President Kathy Fell presents the Chapter's first 2010 President's Award for Most Volunteer Hours to John Hollandsworth. John logged 193 service hours last year.

Photos by Dennis Reeves

## **TEN CHAPTER MEMBERS RECERTIFIED AS VIRGINIA MASTER NATURALISTS**

**Virginia Master Naturalists who recertified for 2011 are now sporting their own Virginia Big-eared Bats. Starting with 2010, VMN volunteers who recertify for the next calendar year by completing 40 hours of service and 8 hours of advanced training earn a special limited edition lapel pin featuring a Virginia species with artwork by a Virginia artist. This year's pin features Virginia's state bat (with artwork by Carl "Spike" Knuth provided by the Virginia Department of Game and Inland Fisheries), in hopes of drawing attention to these important creatures.**



Photo from  
<http://virginiamasternaturalist.blogspot.com/2011/03/few-batty-news-bits.html>

**Members of the Southwestern Piedmont Chapter who recertified for 2011 are Gael Chaney, Christy Deatherage, Kathy Fell, Danny Martin, Susan Martin, Tamara Poles, Lynn Pritchett, Dennis Reeves, Carolyn Turner and Larry Turner.**

## Forensic Entomology— Applying Arthropod Biology to Criminal Investigations.

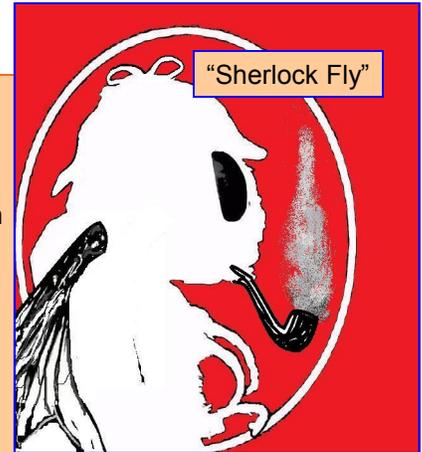
What do insects have to do with forensic science? Dr. Joe Keiper can explain the relationship in a way that can entertain, intrigue and educate the listener.

Keiper, executive director of the Virginia Museum of Natural History, gave a free public lecture on his activities in the emerging science of forensic entomology in the Museum's Great Hall on February 17. The lecture was sponsored by the Southwestern Piedmont Chapter of the Virginia Master Naturalists.

Forensic entomology studies the insects and other vermin found in corpses. The sequence in which they appear, the kinds of insects, and where they are found in their life cycle are clues that can shed light on the time of death, the length of a corpse's exposure, and whether the corpse has been moved. As one of about two dozen or so U.S. entomologists with forensic experience, Keiper worked as a law enforcement consultant with the Cuyahoga County Coroner's Office in Ohio, applying his knowledge to this scientific discipline to estimate the time and place of death in homicide investigations.

Insects, Dr. Keiper explained, are the real drivers to human decomposition, removing biomass from the bones much faster and more completely than bacteria and fungi. According to the Wikipedia article, "Decomposition", the most important insects that are involved in the process include the flesh-flies (Sarcophagidae) and blow-flies (Calliphoridae), such as the green-bottle fly seen in the summer.

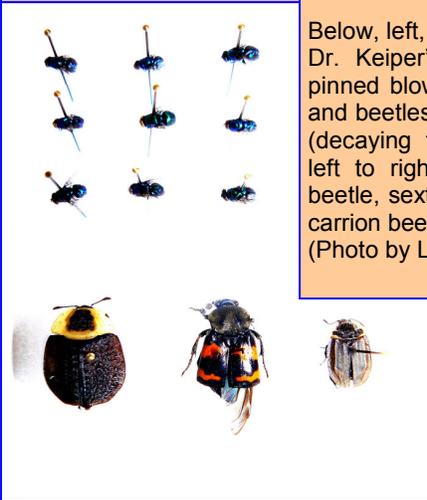
Each stage of the development of a particular type of fly -- from wriggling maggot to dormant, shell-like pupa to the insect's emergence as an adult -- takes a predictable number of hours or days. The fly maggots, or larvae, provide the most precise detail because they get measurably bigger as time passes. By collecting the largest (and by inference oldest) larvae, then figuring out what fly species they represent, a forensic entomologist can, within limits, estimate what's called the post-mortem interval, or PMI: the period between death and the body's discovery.



Above, Dr. Keiper answered questions from his audience during and after his slideshow presentation. With carefully chosen facts and anecdotes, he engaged and amused his audience, explaining how the science of entomology can be used to solve crimes. (Photo by Lynn Pritchett) "Sherlock Fly" logo adapted by Lynn Pritchett from 2005 "Insect Fear Film Festival" at the University of Illinois.

**FORENSIC ENTOMOLOGY (continued)**

Right, the life cycle of a blowfly. (Source: The Plain Dealer & Michigan State University @ [blog.cleveland.com](http://blog.cleveland.com))



Below, left, a photo of Dr. Keiper's collection box of pinned blow (green bottle) flies and beetles that feed on carrion (decaying flesh). Beetles from left to right: American carrion beetle, sexton beetle, margined carrion beetle. (Photo by Lynn Pritchett)

Insect maturation may vary. Temperature is one variable. Because insects are cold-blooded, the cooler it is, the slower they grow. The amount of biomass available as food and the amount of drugs such as cocaine in the corpse control the rate and size of maggot growth. So forensic entomologists have to research weather records if the body was left outdoors, or check thermostat settings or ambient conditions if inside, and factor those into their PMI estimates.

Dr. Keiper has worked for years to refine the science and broaden its uses. In 2009, working with Cleveland State University graduate student Krystal Hans, Keiper decided to test an accepted principal in forensic entomology – that the types of bugs found on a body can be a unique "signature," indicating whether it's been moved from one place to another.

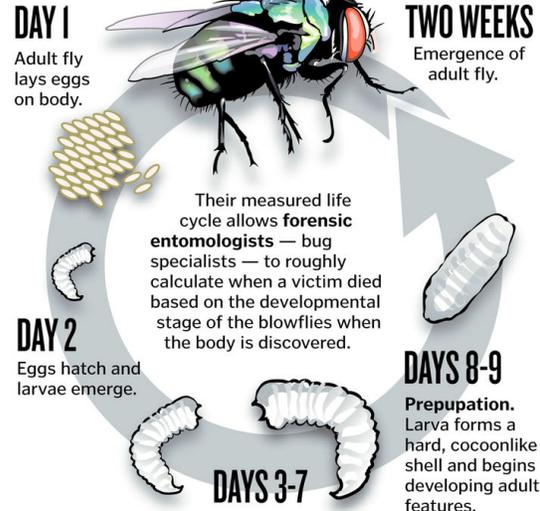
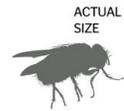
Keiper and Hans placed six 40-pound pig carcasses in various settings: two on a farm in eastern Cuyahoga County, two on the Cleveland State University campus in downtown Cleveland, and two that spent 24 hours on campus and then were moved to the farm. Over a two month period, investigations of the corpses showed no insect indicator that the bodies had been moved, at least over short distances. The bugs devouring the city and country pigs were indistinguishable. Apparently, carrion flies are so mobile, bodies must be moved large geographic distances to an area where the insect species on the body is not the most common found in the area the body is discovered.

Forensic Entomology is an example of applied science, the application of scientific knowledge transferred into a physical environment. In like manner, one of the main goals of the Virginia Master Naturalist program is to train individuals to apply the study of natural science to activities that improve its local environment and community.

The next Virginia Master Naturalist training class in Martinsville will begin in August, and will include studies in Entomology and Invertebrates.

# The life cycle of a blowfly

It never takes these insects long to make their way to a decomposing body, and the first thing they do when they get there is lay eggs. This timeline is based on a constant temperature of 70 degrees.



SOURCE: Michigan State University Dept. of Entomology

THE PLAIN DEALER

## Life in the Ocean Basement

On February 25th, several Master Naturalists attended a lecture at the Museum of Natural History titled "Life Deep Beneath the Ocean: The Most Remote Biosphere on Earth". Dr. James Cowen is a Research Professor in the Department of Oceanography at the University of Hawaii at Manoa. The lecture was quite fascinating and very well attended.

Dr. Cowen explained that hydrothermal fluids circulate in cracks and fissures in the basaltic crust below the sediment on the ocean floor. This is also called the ocean basement. Researchers have been drilling into this crust, extracting cores, and installing equipment called "corks" to sample temperature and chemicals found in the fluids. Bacteria-type organisms called hyperthermophilic anaerobic Archaea live in this habitat below the ocean floor. These organisms thrive in heat and depend on sulfur-based compounds for generating energy.

There are also species of virus believed to exist in this habitat as well. Data is collected from sampling stations close to mid-ocean ridges, where new crust is being formed, and then in locations progressively farther away from the new crust.

This data shows a drop in the chemicals used by the Archaea and a rise in the by-products of Archaea metabolism as the sample sites become farther from the mid-ocean ridges.

I found a paper written on this topic by Dr. Cowen that explains in greater detail:

<http://www.ifa.hawaii.edu/~meech/a740/2004/fall/papers/ResMicrobio04.pdf>

Kathy Fell, Certified Master Naturalist

## Earthquake Prediction, Dinosaur Death, and Other Discoveries from the Deep Sea!

Several area educators gathered on February 26th to participate in a hands-on workshop held by the Deep Earth Academy. Participants learned about Dr. James Cowen's experience on the JOIDES resolution, a research vessel that cruises the ocean for core drilling. Core samples are used for an array of research aboard the ship, from microbiology to chemistry. Along with Dr. Cowen's description, everyone learned what life was like living on the JOIDES and the processes involved in the core drilling. Participants then went on to hands-on activities where they discovered how to incorporate JOIDES research into their curricula. Microfossils pulled from the core samples were examined using microscopes and educators studied authentic cores. The workshop hosts also gave demonstrations and helpful hints on how to include technology in the classroom. Everyone enjoyed the enthusiasm of the presenters and walked away with valuable resources for their educational audiences.

Rachael Wingfield, Certified Master Naturalist



Photos supplied by VMNH

## Henry County Administrator Lectures on Natural Resource Conservation

The Southwestern Piedmont Chapter of the Virginia Master Naturalists invited its members and the general public to its monthly meeting on Thursday, March 17th, in the Great Hall at the Virginia Museum of Natural History.

Benny Summerlin, Henry County Administrator, spoke of recent successful development of local government-business-private partnerships, intra-government cooperation in the region, and individual opportunities and contributions by volunteers seeking enhancement of environmental assets in our community.



Photo from Henry County Website

Mr. Summerlin used a Power Point presentation to report on efforts in Henry County to conserve and preserve resources in the general areas of Natural Resource Conservation, Environmental Protection, and Efficiency, particularly as it relates to energy efficiency.

Mr. Summerlin gave an update on the use of grant funds to retrofit lighting in the Administration Complex and to install a solar hot water heater for use at the jail. He summarized progress on trails in the area, and spoke of the effort to produce a plan for a Mayo River State Park. He also gave an update on the status of the county's seven convenience centers and recycling efforts there, as well as a report on the new Henry County consolidated shop facility in Bassett. Of particular interest to the group was his report on the use of recycled motor oil to provide all of the heat for that facility this past winter.

### **HOUSEHOLD HAZARDOUS WASTE DAY**

Henry County Service Center, 2285 Fairy Stone Park Highway  
Apr 16, 2011 9:00 AM - 12:00 NOON

Henry County, the City of Martinsville, and Gateway Streetscape work jointly to sponsor two Household Hazardous Waste Days during the year. One is held in April and one is held in October. At these events, City and County residents may dispose of such items as paint, motor oil, gas, antifreeze, batteries, computer parts and used cell phones. Again, no business or commercial entities are allowed to participate.

## SW Piedmont VA Master Naturalist WINS \$1k!

Southwest Piedmont Virginia Master Naturalist Chapter has been awarded a \$1,000 grant in the *Beautification and Community Greening Category*. The KVB grant program focuses greater resources and attention on individual localities throughout the Commonwealth and how they are addressing the issues of litter prevention, recycling, waste reduction, beautification and education. In honor of Earth Month, Keep Virginia Beautiful (KVB) is awarding "30 Grants In 30 Days" in April, 2011. Source article: <http://www.keepvirginiabeautiful.org/blog/2011/04/04/sw-piedmont-va-master-naturalist-wins-1k/>

The Southwest Piedmont Virginia Master Naturalist Chapter, along with the Virginia Museum of Natural History, will restore, beautify and create a stewardship project in Martinsville City's 30 acre J. Frank Wilson Memorial Park.

The goals of the project include;

- (1) invasive species removal and control
- (2) nature trail enhancements and maintenance with identification and preservation of native flora
- (3) beautification of gateway and public gathering spaces with debris removal and native species mini-gardens
- (4) installation of recycling bins
- (5) graffiti removal at shelters
- (6) implementing riparian restoration and natural and structural erosion control measures; and,
- (7) coordinating at least four Saturday community-wide Clean-up, Green-up events.



J. Frank Wilson Memorial Park is located in the heart of Martinsville and adjacent to the Virginia Museum of Natural History. The park has been neglected for years but with community support and hard-working volunteers, the park can again offer families, children, students, and individuals an outdoor environment that fosters appreciation and enjoyment of natural resources, while becoming a much-needed community asset.

KVB provided the opportunity for government, non-profit and/or service organizations in Virginia to apply for one of (30) \$1,000 grants in three different categories: 10 grants for plastic bag reduction and recycling, 10 grants for cigarette litter prevention, and 10 grants for community greening and beautification. These grants are made possible by KVB's partners, Walmart and Waste Management.

The mission at Keep Virginia Beautiful is to engage and unite Virginians to improve our natural and scenic environment. Our goals include becoming the leading statewide voice, providing a framework for improved communication and collaboration, cultivating and supporting sustainable programs, and engaging citizens by linking them to volunteer opportunities and information through these 5 impact areas: Litter Prevention, Waste Reduction, Recycling, Beautification, and Environmental Education.

In the coming weeks, a steering committee will be assembled to begin planning for this important one-year, chapter service project. Interested chapter members should contact Denny Casey, [denny.casey@vmnh.virginia.gov](mailto:denny.casey@vmnh.virginia.gov), 634-4184.

## President Fell's Report on the Master Gardener Symposium

In March, I attended the Master Gardener Symposium in Leesburg, VA. This turned out to be a very well organized two day conference and worth the 4+ hour drive to attend. I also got in a visit to with my brother and his wife who live in the DC area. I attended 8 sessions over the two days and visited the vendor area. Most of the material covered is of general interest to Master Naturalists as well as Master Gardeners.

The overall topic for the 2nd Annual Gardening Symposium was Sustainability. Sustainability is the capacity to endure. In ecology, sustainability describes how biological systems remain diverse and productive over time. Long-lived and healthy wetlands and forests are examples of sustainable biological systems. For humans, sustainability is the potential for long-term maintenance of well-being, which has environmental, economic, and social dimensions. Brief descriptions of the presentations follow:

Amy Newton, founder and president of the Newton Marasco foundation spoke about how we can become better stewards of the environment. If they were not so far away, I would jump at the chance to partner with this organization. I did ask Amy if she would be willing to visit us for a talk. She covered numerous ways we can become better stewards of the environment around our homes and offices and how we can influence change through our actions with businesses and government. The Newton Marasco Foundation sponsors the Green Earth Book Award. This award is given annually to authors and illustrators of books for children about environmental stewardship. This foundation works with the local schools to provide programs on sustainability and stewardship. We played "So you want to be an Eco-Millionaire". They also have a Jeopardy game. This would be a great group for us to meet and share education program information.

Find out more: <http://www.newtonmarascofoundation.org/>

Bryce Lane, Horticulture instructor at North Carolina State and host of "In the Garden" gave a presentation on Water wise gardening. His presentation covered topics including global warming, soil science, selecting the right plant for the right place, soil preparation and planting tips. Bruce also presented a list of his favorite garden plants.

Find out more: <http://www.unctv.org/inthegarden/programd.html>

(Continued on next page)

## President Fell's Report on the Master Gardener Symposium

(Continued)

Kevin Monroe of the Audubon Society of Northern Virginia gave a presentation on "Gardening to Attract Wildlife". This group has a certification program for backyard habitats that have been shown to attract a minimum of 10 of 30 targeted species of birds, insects, reptiles, amphibians and mammals. Interested home owners can meet with a "Wildlife Ambassador" who will work with the home owner to develop a plan specific to their property. Kevin described three types of habitats: the brush shelter, the pool and the pocket meadow, and explained how to establish them. This is another excellent resource that I wish was closer to Martinsville!

Find out more: <http://www.audubonva.org/>

Nan Chase, author of *Creating Edible Beauty in Your Yard*, gave a presentation on gardening in small spaces. Her talk also highlighted a number of recipes from her book, all made from things grown in her garden.

Find out more: <http://eatyouryardbook.com/>

Barbara Arnold, Master Gardener, gave an excellent presentation on container gardening. Her talk covered selection of pots and plants as well as how to maintain container gardens for optimal display. She provided an excellent list of her favorite plants for use in container gardens.

Janet Davis, Horticulturalist and owner of Hill House Farm and Nursery, talked about plant species native to this area. Her nursery specializes in native plants. She was also one of the vendors at the symposium with a large display of native plants for sale.

Find out more: [http://www.hillhousenativeplants.com/about\\_us](http://www.hillhousenativeplants.com/about_us)

Joe Keyser, Environmental educator, gave a presentation "Hot Composting and Global Warming". His talk covered the basics of outdoor compost piles and composting indoors with red worms.

Find out more: <http://vermilab.org/>

Peter Dahl, professional Arborist and co-founder of The Pruning School, gave a presentation on pruning. Peter Dahl, professional Arborist and co-founder of The Pruning School, gave a presentation on pruning.

Find out more: <http://www.thepruningschool.com/main.htm>

Denise Shreeve was the most interesting vendor. She had a display about native Orchard Mason Bees (*Osmia lignaria*). These bees are native pollinators that rarely sting. She was selling bee houses and dormant bees to populate them.

Find out more: <http://www.ournativebees.com/>

## January 1st Walk on the Dick & Willie Passage

The Dan River Basin association (DRBA) held its first 2011 "First Saturday Outing" event at the Dick & Willie Passage in Martinsville. More than twenty people walked on the 4.5 mile trail that runs along part of a former Danville and Western Railroad track. The 10-foot-wide paved trail is nearly level, with attractive landscaping that includes split rail fencing and carefully selected trees, and extends from the Virginia Avenue Bridge near El Parral Restaurant to Mulberry Creek east of Martinsville.



Photo submitted by Lynn Pritchett

DRBA volunteers Lynn and Ashby Pritchett served as Trip Coordinators and led the walk. Lynn identified different trees and plants along the trail, identifying native and non-indigenous or invasive species.

Winding through the heart of Martinsville, the Dick and Willie Passage is a graceful bridge between pure wilderness and developed land. It provides a nexus where people and nature can co-exist to their mutual benefit. Walking participants noted this in their observations.

Henry County Administrator Benny Summerlin identified several buildings housing factories and businesses that back up to the trail. Lynn Pritchett pointed out deer hoof prints running along the trail. Joan Ragland of Martinsville said she often saw wildlife along the trail, including a fox that once ran in front of her bike.

Since opening last October, the Passage has proven popular among area residents and tourists alike. Despite damp, foggy morning weather that threatened rain, the group passed several trail joggers and bike riders. The fortunate choice of place and timing for DRBA's First Saturday Outing provided a great opportunity for exercise and fellowship.

Ashby Pritchett

## VOLUNTEER HOURS

Volunteer hours reported as of March 31, 2011:

Categories -

- Administration
- Advanced Training
- Citizen Science
- Education
- Stewardship

Total— **98** hours or 4% of our Chapter Goal.

Thank you, volunteers!

Report all volunteer hours to

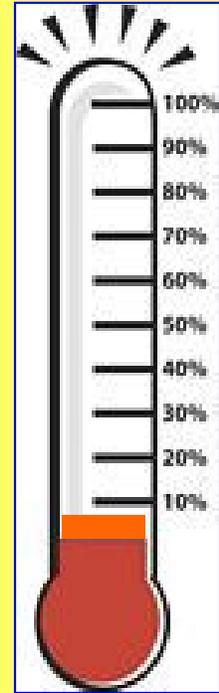
Christy Deatherage, turkeyball@comcast.net, (276)627-6276.

Or

Submit hours to the VMN Volunteer Management System.

**2011 CHAPTER GOAL:**

**2011 VOLUNTEER HOURS**



## [CALENDAR OF EVENTS FOR APRIL 2011](#)

**To see the full Southwestern Piedmont Chapter Calendar of Events, go to <http://www.virginiamasternaturalist.org/southwesternpiedmont.html#news> And click on “Calendar of Events”.**

April 7-10, 2011 Virginia Forestry Summit Williamsburg, VA  
[http://www.vaforestry.org/vfa\\_events.html](http://www.vaforestry.org/vfa_events.html)

April 15, 2011 Earth Day at VMNH from 9:30-11:00 AM and noon-1:30PM. Education Service Project opportunity. Please contact Robin Jensen for more info: 634-4188 or robin.jensen@vmnh.virginia.gov

April 16, 2011 9:00 AM—12 Noon, Household Hazardous Waste Day, Henry County Service Center, 2285 Fairy Stone Park Highway.

Apr 16, 2011 1:00 PM - 5:00 PM, Wilderness Survival. Advanced Training Opportunity. Contact Smith River Adventure Outfitters at 252.0701 or Parks and Recreation at 634.4645 for more information.

April 16, 2011 1:00 PM - 4:00 PM, Environmental Education Expo, Help to man the display table for our SW Piedmont VMN Chapter, Philpott Lake Park by visitor Center. Volunteer opportunity.

April 20, 2011 (Wednesday) 10:00 AM-12 Noon then continuing until 6:00 PM, Cache-In Trash- Out, Hike/ Bike the Dick & Willie Trail Passage, meet at Doyle Street entrance to trail.

April 22, 2011 Earth Day Screen on the Green- starts at 7:00 PM. Education Service Project opportunity. Please contact Tamara Poles for more info: 634-4159 or tamara.poles@vmnh.virginia.gov

April 23, 2011 Earth Day Festival from 10:00 AM-4:00 PM. at Smith River Sports Complex Education Service Project opportunity Please contact Tamara Poles for more info: 634-4159 or tamara.poles@vmnh.virginia.gov

April 30, 2011 8:45 AM—Until, Herp Bioblitz, Turkeycock/Chestnut Mountain, Advanced Training Opportunity. Call Larry Turner for information.