A Publication of
WILD VIRGINIA

Ancient Mountain Sentinel

Range after range
of mountains.
r after year
after year.
am still in love.
Snyder

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This is our LAST paper edition

Wild Virginia is going digital! We're doing our part to reduce our footprint on this planet. Following the distribution of this edition, all future newsletters will be sent via e-mail and available to read and download at:
wildvirginia.org (see pg. 6)

"Fracking" for Natural Gas: "Just Say No" to This Very Bad Idea

Hydraulic fracturing, or "fracking", has been in the news and on people's minds a great deal recently. The practice has been common in some western states for many years, but has become more widespread in eastern states only during the past decade.

Fracking is a technique used to extract natural gas, or methane, from various types of deposits and rock formations. A geologic formation of Marcellus shale deep underground makes fracking possible in parts of the Appalachian region (including western Virginia and roughly half of the George Washington National Forest, or GWNF). Pennsylvania has been at the center of fracking activity in the East, though it also occurs in New York, Ohio and West Virginia.

Laurel Fork in Highland County, one of the few areas of the GWNF that is not threatened by future oil & gas leasing.

Natural gas is bound to clay particles in the small pores and microfractures of the Marcellus shale. Fracking involves drilling deep wells (often a mile or deeper) vertically before turning horizontally and continuing to drill for up to a mile. Using intense hydraulic pressure, the rock is fractured in multiple locations along the horizontal bore, which frees the natural gas from the shale and allows it to be extracted.

The hydraulic pressure is applied by injecting a mixture of sand, water, and soup of chemicals into the well. This brew of material is called fracking fluid, though industry representatives often refer to it simply as "mud." The fracking fluid is the source of many serious environmental concerns. First, vast amounts of fresh water are needed in the process. In some drilling locations, streams have basically been dried up by diverting their waters for fracking.

Equally (if not more) objectionable is the brew of chemicals used in fracking fluid. The fluid usually contains things that are known to be toxic. It may contain diesel fuel (with benzene), methanol, hydrochloric acid, and formaldehyde, among other things. It is not possible to determine the exact contents of fracking fluid though, as each company in the business has their own secret concoction, all of which is proprietary information. That is, the ingredients in the fluid do not have to be revealed to anyone. This seems so

(Continued on page 4)

Deadline Extended for Comments on Draft Forest Plan

The draft Land and Resource Management Plan for the George Washington NF (GW) was released in May, 2011. It was accompanied by a draft Environmental Impact Statement, numerous maps, and several supporting documents. On August 11, the Forest Service issued errata documents pointing out numerous errors and inconsistencies in the draft plan. The original deadline of September 1 for submitting comments on the draft plan has been extended to allow interested parties to review the new information. The new deadline for comments is **October 17, 2011**.

We are continuing to review the draft plan and encourage you to visit our website, www.wildvirginia.org, for information. We have sample comment letters that can be downloaded if you wish to let the Forest Service know what is important to you in managing our national forest. Please take a few minutes to **make your voice heard!**

Wild Virginia Update

Letter from our President, Jennifer Johnson

This month the Wild Virginia board will hold our annual retreat. We will gather in a peaceful setting with some delicious food to spend the day talking about the future of the organization and the future of the forest. If you have not been hiking the Appalachian Trail for the past … oh, three years… then you know that the U.S. economy continues to struggle, and almost everyone is cutting back on spending, including some of Wild VA's long-time donor foundations. The board will address these challenges by refocusing our goals and committing ourselves to being the best non-profit that we can be, while creatively thinking about ways to fund our efforts.

Thanks to all of you, Wild Virginia is growing! Our members continue to be an important part of our revenue base and we take that as a sign that we are doing something right! We know there is real passion out there for untouched wilderness and biodiversity. We talk to people all the time about saving some of Earth for future generations. We hope we are giving you a voice in the forest planning sessions, in Washington DC, in lawsuits about burning trees for biomass energy plants, and in the public conversation. But if we are not saying something that you would like to hear, or we are not saying it loudly enough, then please contact us and tell us your thoughts. As the board of Wild Virginia begins strategic planning for next year, we would love to hear feedback on how our members think we are doing.

The forest has no voice that can be used against timber companies that want to cut it down or energy companies that want to drill into its mountains. Animals cannot stop a road from being built through their habitat and rivers cannot stop the runoff from development. That's why Wild Virginia exists – to speak for the things we love in the natural world. Let your voice be heard!

Volunteer Spotlight: Kristin Taverna

Kristin has been affiliated with Wild Virginia since its humble beginnings at UVA back in the mid-1990's. Much has changed since then, but the core mission of protecting the George Washington National Forest remains the same. She has served on the board for the past 6 years.

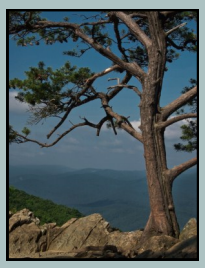
In addition to her volunteer work, Kristin divides her time between raising two young boys and working part-time as a plant ecologist for the Virginia Division of Natural Heritage. Her work as an ecologist takes her into the woods throughout Virginia, inventorying natural areas and documenting rare natural communities. She holds an MS in Plant Ecology from the University of North Carolina and a BA in Environmental Science from the University of Virginia. Kristin and her husband Jason (a former Board member of Wild Virginia) love nothing more than sharing the outdoors together with their boys, be it on foot, in a canoe, or on all fours in their garden.

Kristin with her sons, Dylan and Ian, on the summit of Humpback Rocks off the Blue Ridge Parkway

WV Photo Contest Winners!

Thanks to everyone who submitted photos of the George Washington National Forest for our photo contest! Here are the winners in each category:

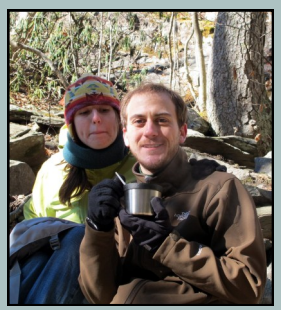
Landscape – Raven's Roost Overlook by Elizabeth Swider



Native Plants – Red Shelf Fungus by Ben Wyrick (and yes, we realize that fungi are not plants)

Wildlife – Horned Beetle by Ana María Méndez Ritchie

Humorous/General – Is He Going to Share? by Mary Hanna



Honorable mentions go to Karen Pape, Eleanor Amidon, Wade Neely, Stan Willenbring, and Heather Cormons.

View photos on our facebook page!

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DONATIONS:

Wild Virginia is an independent 501(c)(3) non-profit organization. Please make checks payable to Wild Virginia and mail to PO Box 1065, Charlottesville, VA 22902. All donations are tax deductible to the extent of IRS law.

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Wild Virginia Hikes and Outings

All hike info also available on our website: http://www.wildvirginia.org

A Full Outings Calendar : COME JOIN US!

Saturday - September 17, Hone Quarry Circuit Hike

This is a beautiful 5.9 mile circuit hike with an elevation gain of almost 1500 feet. Hike difficulty is rated moderate. The trailhead starts in the Hone Quarry Campground. To complete our circuit we'll hike on three different trails: Heartbreak, Hone Quarry Mountain Trail and Big Hollow Trail. This will be a joint hike with the Shenandoah Group of the Sierra Club.

Meet at the trail head 10:45 AM. Hone Quarry Campground is west of Harrisonburg. Take Hone Quarry Rd/FR62 west from State Road 257. For carpool rides from Charlottesville area meet at 9:00 AM at Shenandoah Joe's Coffee on Rt. 250 just west of UVA campus. Bring lunch, water to drink and any personal first aid you need. Bad weather will cancel this trip so please check in with leader Eric Gilchrist, ericgrv@gmail.com or 434 -882-3179. Please RSVP.

Sunday, October 23, Hardscrabble Knob

Explore the northern reaches of the Ramsey's Draft Wilderness and summit its highest peak, Hardscrabble Knob, at 4,282 feet. This hike climbs steeply from the North River up Springhouse Ridge along the Wild Oak National Scenic Trail and then combines the Hiner Spring Trail, Ramsey's Draft Trail, and Hardscrabble Knob Trail to reach the summit.

Designed as an out and back hike of about 7 miles, there are a couple of route options that can make this a one-way hike of either 7 or 8 miles. This would require some shuttling of vehicles. These options will be considered, if the group wishes.

Regardless of the route chosen, this hike will be a workout. Although not long in distance, there is 2,000 feet of elevation gain with 1,000 of that within the first mile. However, being immersed in this wilderness setting near autumn's peak colors should more than make up for the physical efforts.

You should plan on being in the woods a good part of the day. Bring water, snacks and lunch. Sturdy trail shoes or boots are recommended. Other gear and clothing suggestions based on weather and trail conditions will be provided by the hike leader.

Since we will be in a federally designated wilderness area for part of this hike, group size is limited. Early registration is advised. Contact Ron Fandetti at fanjet50@gmail.com or (401) 529-8025 by Sunday, October 16th to reserve a spot. Additional details including start time, directions, and car pool arrangements will be provided.

Sunday November 6, Little Devil's Stairs in Shenandoah National Park

In celebration of the weekend after Halloween we will climb Little Devil's staircase then return to our cars via the Piney Branch Trail for a 7.8 mile loop. We will be able to visit an interesting old family cemetery that offers a poignant reminder of the people who lived in the area before it became a national park .

The climb up Little Devil's Stairs is steep and in a few spots might require some scrambling making this a difficult hike. Be sure to wear supportive hiking shoes with good traction. As always, bring plenty of water, lunch and snacks.

Please contact Bette Dzamba (bd4q@virginia.edu) or 434 295-5186 to sign up and for more information on carpooling, directions to the trail head, starting time, more details about the route, etc.

"Fracking" (from page 1)

very wrong on many levels, but the Energy Act of 2005 allows it.

Some of the fracking fluid, often as much as a third of what is injected, flows back to the surface as wastewater. It not only contains its original ingredients, but often picks up corrosive salts and naturally occurring radioactive materials encountered during drilling. In the short term, this backflow is stored in holding ponds. And yes, there are sometimes accidents and leaks. An April 19, 2011 spill in PA resulted in thousands of gallons of this liquid flowing across farm fields and into a nearby stream.

From the holding ponds, this backflow liquid is either injected deep into the earth, or it is shipped in large trucks to wastewater treatment plants. Unfortunately, conventional sewage treatment plants are not able to handle substances like corrosive salts, radioactivity, and toxic chemicals. They were developed to treat biological agents (like bacteria) that are harmful to humans, not chemical substances. Nonetheless, after treatment, the wastewater is released, often into rivers or other waterways that serve as drinking water supplies. It is causing quite a stir in PA, and no one knows exactly what to do about it. There are even instances of the backflow liquid being spread, untreated, on land. In June 2008 in the Fernow Experimental Forest (in the Monongahela NF in West Virginia), this treatment resulted in mortality of all ground vegetation within two days and roughly half of the trees within two years.

There has been some good investigative journalism and much anecdotal information linking fracking to contaminated drinking water. There are also grave concerns about air quality in areas where fracking occurs.

ProPublica has published numerous articles about fracking in Pennsylvania and New York. The New York Times ran two revealing articles in their 2/26 and 3/3 issues earlier this year. Results of a Duke University study, released in May, linked contaminated drinking water (high levels of methane) to nearby fracking operations in northeastern PA and upstate NY. Visit Wild Virginia's website for links to this information.

Ready for a bit of good news? The draft management plan for the GWNF prohibits horizontal drilling. If this ban stays in place, it will severely limit fracking possibilities in the national forest. This is a very positive step, which we applaud. However, about 93% of the GWNF will be available for some form of conventional oil and gas leasing under the draft plan. Even conventional vertical wells normally employ fracking techniques, though not multiple fractures as is the case with horizontal wells.

We are still reviewing the issues with increased oil and gas leasing in the national forest. Simply put though, we feel the significant disturbances to natural areas (including important watersheds) and the environmental costs of drilling make it unjustifiable. We strongly support the ban on horizontal drilling in the GWNF but would like to go a step further. Oil and gas leasing should not be permitted in the GWNF on those lands where subsurface rights are federally owned. (Yes, another bit of reality - subsurface rights on approximately 16% of the land in the GWNF are privately owned.)

Please contact the US Forest Service, thank them for the proposed ban on horizontal drilling in the GW, and **tell them keep it in place!** Our website has info about the draft plan and how to submit comments. Your comments can make a difference.

The Forest Planning Party in August was a great success!!

The pizza was a hit, and more than 150 letters about the draft Forest Plan were sent to the Forest Service and Virginia congressional members. Many thanks to those who attended and were eager to express their ideas about the plan!

Species Spotlight - Northern Red Back Salamander *(Plethodon cinereus)*

Article by Eric Gilchrist (adapted from articles by: Va DGIF, Western Connecticut State Univ., and Wisconsin DNR)

This is a hardy, common, sometimes abundant, terrestrial (woodland) salamander that lives in forested areas throughout Virginia. Northern redbacks have not been found in parts of Southside Virginia and Middle Peninsula.

This salamander is different than most. Not only does it live on land its whole life, it doesn't have lungs or gills and breathes through its skin. To help absorb oxygen, it needs moisture and has to keep its skin wet. Thus, they live in more humid forest habitats and are abundant beneath old logs, moss, leaf mold, and stones, in evergreen, mixed, and deciduous forests. Occasionally they may be found in fairly dry habitats.

Redbacks are 2 to 5 inches in length. They have a slender body that is slightly flattened dorsally and well-rounded on the sides. There are usually 18-19 costal grooves. They have small legs with short, thick toes. The five hind toes are slightly webbed at the base. There are 4 toes on the forefeet. Redback males have a prominent gular fold.

Redbacks can occur in 2 distinct color phases, the redback phase and the leadback phase. The redback phase is characterized by a broad, median, dorsal band that extends from the head through the trunk and down the tail. The color of the stripe can vary from light grey and dull yellow to bright red. Some stripes may even contain specks of black. The sides of the body are dark grey or black and become lighter towards the belly. The belly is mottled grey and white. In the leadback phase the body is uniformly dark grey to black with the head and legs a little lighter.

During the spring and summer, the redback is active at night and walks along the forest floor under leaves, rocks, and stumps. You might see one climbing a tree or shrub in search of food. They are also found in cohabitating groups of 2-7 under rocks and wood. Redbacks feed on a wide variety of invertebrates in almost complete darkness. Such invertebrates include flies, spiders, snails, earthworms, ants, and a variety of other insects. Prey is captured by quickly thrusting their tongue forward. Redbacks are limited to forage

The Northern Red Back Salamander *(Plethodon cinereus)* (Photo by fcps.edu)

in moist areas and so are able to forage optimally shortly after rainfall. However, during dry periods when Redbacks are restricted to under rock and logs, foraging becomes tougher. Therefore, it will gorge itself during favorable foraging conditions and live off its fat reserves when food becomes scarce. Birds, shrews and snakes, make a meal out of this salamander.

Here in Virginia, the mating period extends from October to April. Courtship consists of the male rubbing a substance from a gland on his chin onto the head and nose of the female to stimulate her to breed. Eventually, the male deposits spermatophores which are later recovered by the female in her cloaca. These clusters are held together and suspended from the ceiling of the salamander's nest, usually a rotted out log but may also be any available crack or crevice. A group of 5-12 eggs is laid in rotting logs and stumps, or in cavities under rocks from May through July. Hatching occurs from August through September. The female attends the eggs until hatching in late August or September. Sexual maturity occurs after about 2 years.

Don't get between a Redback and her eggs, particularly as the eggs get closer to hatching. An article in the December 2010 issue of the journal Herpetologica describes the behavior of the redback, found in forests of North America. The females proved to be more vigorous about guarding clutches of eggs than territory or food.

The study was conducted in a laboratory setting, using wild redbacks caught in New Hampshire. Female salamanders and their nests of eggs were "threatened" by the introduction of a nonbrooding female salamander for 15-minute intervals. While the first reaction of many mothers was to curl tightly around their eggs to protect them, substantially more aggressive behavior toward the intruder followed. In many instances, nudging, chasing, and snapping behaviors eventually gave way to repeatedly biting the intruder.

The female may reproduce only every two years because of the substantial energy required to produce and attend her clutch. As the eggs become more viable, the mother's protection increases. The research found that mothers were more aggressive in defending their six-week old eggs than their four-week old eggs.

At the same time, the number of eggs in the nest and the size of the mother did not appear to make a difference in her aggression. Redbacks have the ability to recognize the developmental stage of their eggs, or at least are able to determine the amount of time that has passed since they laid their eggs. The older the brood, the more likely it is to survive to hatching, making it more important to the mother.

How much do you know about Wild Virginia?

(Test your knowledge on all things Wild! Answers at bottom of page)

Wild VA is dedicated to protecting wild forest ecosystems in the George Washington National Forest. How many acres does the forest cover?

A) 1,000
B) 10,000
C) 100,000
D) 1,000,000

Wild VA produced a report called "The State of Our Water: Managing and Protecting the Drinking Water Resources of the George Washington National Forest. " You can read it here: http://wildvirginia.org/wp-content/uploads/2009/01/state-of-our-water-full-report.pdf. How many localities in western Virginia obtain some or all of their drinking water from surface waters of the GWNF?

A) 2
B) 10
C) 22
D) 30

Wild VA is dedicated to protecting habitat for Virginia's threatened native wildlife and plants. How many species of plants and animals categorized as "threatened," "endangered," or "sensitive species" live in the GWNF?

A) 15
B) 25
C) 45
D) 85

Answers: 1) D; 2) C; 3) D

Important Notice about the *Ancient Mountain Sentinel*. In order to reduce our ecological footprint, this is the last issue of our quarterly newsletter that will be mass produced and mailed. Beginning with our Fall issue, electronic versions of the newsletter will be distributed. If you are on our email list and receive notices about our hikes, then you will be receiving the newsletter. If you are not on our email list, you can sign up on our website, www.wildvirginia.org. If you have any questions, please contact David Hannah at (434) 971-1553 or dhannah@wildvirginia.org.

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