The Appalachian VOICE
15 years in print and still FREE
June / July 2012
THIS IS OUR LAND
The Plight of Our Public Places and the Compelling Case for Conservation
ALSO INSIDE: Coal's Big Decline • Return of the American Chestnut
Hidden TREASURES
Special Insert

The Appalachian Voice

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15 Years

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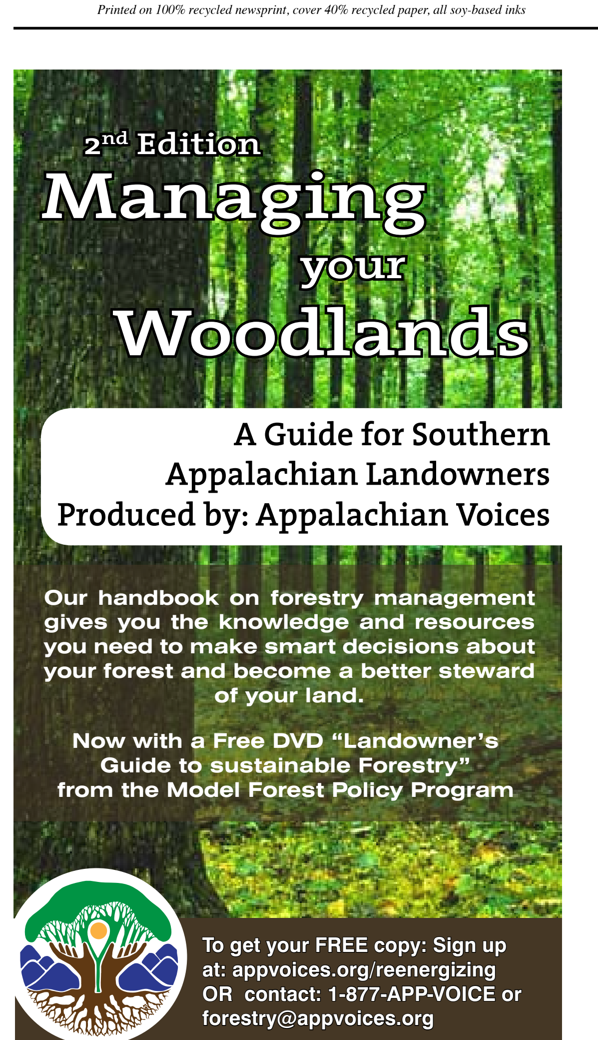

A Note from our Executive Director

Since the days of the uncompromising Republican president, Theodore Roosevelt, the struggle to protect our vital resources has often been countered by a nearly limitless greed for financial gain. But as the venerable Roosevelt — who greatly expanded the budding U.S. national park and national forest systems — said in his 1907 message to Congress, "We are prone to speak of the resources of this country as inexhaustible; this is not so."

One hundred and five years later, our country is slipping backward in the protections of our vital resources. Basic clean water and clean air laws that many take for granted are being challenged in Congress while more species of birds, plants, mammals and insects are added to the endangered species list every year, the landscape is torn asunder to rip raw resources from the earth, and the people are poisoned in the name of corporate profit.

"There can be no greater issue than that of conservation in this country."
Theodore Roosevelt
(pictured with naturalist John Muir in Yosemite Valley, 1903. U.S. Library of Congress Archives)

Roosevelt said, "Behind the ostensible government sits enthroned an invisible government owing no allegiance and acknowledging no responsibility to the people." It takes diligence and advocacy to keep our government accountable to the people and to protect our natural resources. At Appalachian Voices, we are fortunate to have members who care as deeply as Roosevelt did about protecting our planet for future generations. Join Appalachian Voices today and help us protect the air, water, land and communities of Appalachia.

For the mountains,

Willa Mays

P.S. Artists for Appalachia, our 15th anniversary membership meeting and concert, will be held on June 21 in Charlottesville, Va. A fun way to join Appalachian Voices! Featuring Jeff Goodell, Kathy Mattea, Michael Johnathon, Daniel Martin Moore and others — register online at appvoices.org.

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THIS IS OUR LAND

In this land-inspired issue of *The Appalachian Voice*, we take a deep look at the evolution of America's conservation movement, the value of our public lands today, and what it all means for the future.

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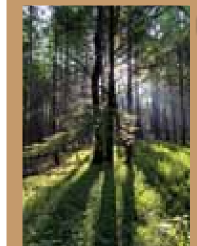

ON THE COVER
Sunrise in the forest near Hyatt Lane in Cades Cove, Great Smoky Mountains National Park. Photo by Spencer Black (blackvisual.com)

Photo by Freyda Strackeljahn

This summer we reprise our popular guide to the most enchanting places in Central and Southern Appalachia, exploring the inspiring historic sites, remote wilderness areas and thrilling adventure locales of our Public Lands.

"Kids In Parks" Gets Kids Outside

By Jessica Kennedy

There is a growing distance between children and nature, says Jason Urroz, director of Kids In Parks, an innovative program working to get children outside, active and connected to nature near their communities.

A joint effort between the Blue Ridge Parkway Foundation and the Blue Cross and Blue Shield of North Carolina Foundation, Kids In Parks seeks to combat the nationwide trend of children living sedentary lifestyles.

According to the program's director, it's natural for people to be outside and active. "It's just a part of being a human really," Urroz says. "From the earliest days, people were connected to nature because they had to be. As we've become more electronic … people are less connected to nature, especially kids."

At the core of Kids In Parks is its Trails Ridges and Active Caring Kids, or TRACK, program. The Kids In Parks website provides links to maps and brochures for each of the 10 participating trails. Children and families can download the trail materials to help guide their hikes. The brochures range from plant and animal guides to the relationships found in nature.

"Our goal is to create a network of trails that will link communities to the Parkway, link the Parkway to communities, and at the same time connect the kids from these communities to the Parkway," Urroz says.

But the program doesn't end when the trail does. Children are invited to fill out an online survey about their experience and to register their completion of each trail. Registering one trail online earns a bandana, two trails earns a nature journal, and three earns a backpack. Children receive a golf disc of their own when they complete the disc golf course.

A young naturalist gets up close and personal with a turtle. Photo by Carolyn Ward

Urroz says the need for an incentive wears off after several hikes and children begin hiking because they enjoy it. Getting children to enjoy being active is the first step to a healthy lifestyle.

In addition to the physical benefits from exercise, children also gain better attention spans and score better on tests, Urroz says. "We know that kids feel better about themselves if they play outdoors," he says.

It's no secret that kids are now spending more time indoors. A Kaiser Family Foundation study published in 2010 showed that children ages 8 to 18 spend an average of 7 hours and 38 minutes using entertainment media in a typical day.

Kids In Parks is working to change this statistic. Roughly 500 children have already registered their hikes through the program, Urroz says. "About 120 of them have come back for a second adventure. Some have come back for as many as six adventures."

Urroz says the program is rapidly expanding. There are currently 10 trails in the program and one disc golf course, most of which are located along the Parkway in North Carolina and Virginia. Kids In Parks serves as a model to other park organizations across the country to get children active outside.

"Before the end of June, we'll have 26 trails, so the program is going to more than double in size," Urroz says.

By The Numbers

68 percent of surveyed Americans who think it's a bad idea for the nation to put progress toward clean energy on hold during economic difficulty [1]

76 percentage of Americans who think the U.S. should move to sustainable energy by 2050 [1]

36 percent of U.S. electricity generated by coal in the first quarter of 2012, the lowest in history, and down more than 8 percentage points since the first quarter of 2011 [2]

3.1 million new jobs in the U.S. in 2010 associated with the production of green goods and services [3]

[1] Civil Society Institute's Americans and Energy Policy Survey;
[2] U.S. Energy Information Administration (see full story p. 22); [3] Bureau of Labor Statistics study

Submit Your Comments On Conservation

The U.S. Fish and Wildlife Service has extended the deadline for public comments about possible changes to the incentives for landowners and others to take voluntary conservation actions that will help species at risk of becoming threatened or endangered. The organization works with landowners to reverse species decline by taking early and effective actions. The extended deadline for public comment is July 13, 2012. Comments can be submitted at regulations.gov.

Land for Tomorrow Announces 5-year Plan

A report released on May 14 by Land for Tomorrow, a coalition of North Carolina organizations advocating land and water protection, calls for the protection of 399,000 acres of land and 1,750 miles of waterways across the state during the next five years and urges state leaders to build on past conservation successes. "Securing North Carolina's Future: A Five-Year Plan for Investing in Our Land, Water and Quality of Life" provides targets for land protection advocates and state policymakers, and highlights conservation's tremendous impact on North Carolina's economy. Visit: landfortomorrow.org

Keeping Up with the Fracking Frenzy

By Brian Sewell

The debate surrounding the controversial method of hydraulic fracturing for natural gas shows no signs of slowing down.

The N.C. Department of Environment and Natural Resources recently submitted a final report in its shale gas study to the state general assembly. The report highlights the importance of establishing a strong regulatory framework before the state explores and extracts natural gas from the Sanford sub-basin deposits found throughout the Piedmont counties.

Some groups praised the DENR report's reticence to endorse the practice outright. The state general assembly, however, is not required to take DENR's recommendations. Before the final report was submitted, a state Senate panel approved a bill that would fast-track the elimination of the state's current prohibitions on horizontal drilling.

Recently, a growing litany of researchers and impacted residents have voiced concerns of fracking's impact on air and water quality, and its effects on human health. At the beginning of May, a peer-reviewed study commissioned by New York's Catskill Mountainkeeper found that chemicals used in fracking can migrate to groundwater over the course of several years, contradicting the claims by the gas industry that these toxic chemicals stay underground forever.

Additionally, a Natural Resources Defense Council report conducted in Pennsylvania's Marcellus Shale concluded that all available options for dealing with contaminated wastewater from fracking are inadequate to protect human health and the environment. Yet, a rule proposed in May by the U.S. Department of Interior that would govern fracking on public lands does not require gas companies to disclose the chemicals used in the injection fluid — an ongoing hindrance to scientific research and the ability of communities to test for fracking-related water pollution.

In April, the Obama administration announced a partnership between the U.S. Department of Energy, the U.S. Environmental Protection Agency and the U.S. Department of the Interior to ensure that continued expansion of natural gas occurs safely with science playing a guiding and critical role.

Massive VA Forest Fire Does Little Permanent Damage

By Anna Norwood

High winds and low humidity were the perpetrators in starting multiple wildfires in southeast Virginia that burned almost 40,000 acres of national forest in April.

The Fire and Aviation Supervisor for the George Washington and Jefferson National Forests, Michael Quesinberry, says these fires were the largest on record for Virginia. Quesinberry accredited the wildfires to low humidity, and particularly high winds, rather than drought.

While the U.S. Drought Monitor shows a concentrated area of extreme drought intensity in parts of the Southeast, the soil moisture of the George Washington and Jefferson national forests was at normal levels, suggesting that drought was not the cause of the wildfires. Quesinberry describes a "recipe for disaster;" four days of high winds and a low humidity of 10 percent, which caused these Virginia wildfires to be so severe.

Luckily, Quesinberry says, there were no catastrophic losses to wildlife. He does not anticipate any wildfires of this magnitude during the summer. These fires grew because of a "four day weather event that came through," Quesinberry says. He expresses how unfortunate it is that these fires simply ignited in such perfect conditions for wildfires to spread.

ENERGY BILLS SKY HIGH?

WAMY Community Action's Weatherization Program is accepting applications for FREE comprehensive energy efficiency improvements for your home, including insulation, air sealing, and a heating system tune-up. Most limited-income households qualify. Applications are available on our website or by contacting/visiting one of our 4 WAMY offices in Watauga, Avery, Mitchell, or Yancey counties.

CONTACT WAMY COMMUNITY ACTION FOR MORE INFORMATION:
www.wamycommunityaction.org or 828-264-2421

EPA Updates Rules Protecting Air Quality

The U.S. Environmental Protection Agency is taking steps to improve air quality by implementing 2008 air quality standards for ground-level ozone and finalizing standards to reduce harmful air pollution associated with oil and natural gas production. Based on the most recent air quality data, the agency determined that 45 areas across the country are not meeting the 2008 standards. One factor contributing to dangerous levels of ozone is oil and natural gas production. New EPA standards will require operators of new gas wells to use technology that prevents the escape of natural gas. High levels of ozone can aggravate asthma or other respiratory conditions and contribute to premature death, especially in people with heart and lung disease.

Meat Processing Center To Help Small Farmers

The first non-profit meat processing center in the country allows local meat to become even more local. The Foothills Pilot Plant, located 40 miles east of Asheville, N.C., in Marion, opened in January and saves area farmers money and time usually spent transporting fowl and game to other plants. The plant is designed to process chickens, turkeys, rabbits and ducks at the rate of 1,000 per day. McDowell County donated the land, the North Carolina Golden LEAF Foundation provided money to build the facility, and eight inmates from the nearby prison provide most of the plant's staff.

ASU Students to Install Water Treatment System in Hair Salon

Students from Appalachian State University won a $90,000 grant from the U.S. Environmental Protection Agency for a project inspired by a hair stylist to prevent hair treatment chemicals from going down the drain. For the "Grow Clean Water" program, students created a model biological graywater system that sends chemical water through aquatic plants chosen for their ability to filter water in natural wetland settings. Once installed, the system will recycle the remaining water through the salon's toilets for flushing. Over the next two years, students will use the grant money to install the first prototype into the Boone, N.C., salon, Haircut 101.

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Hiking the Highlands

The White Squirrel Hiking Challenge

Editor's Note: *We have long featured our region's fantastic places and phenomenal hikes in the "Hiking the Highlands" column. What we have less frequently focused on, however, is how some of our favorite places were protected in the first place.*

Non-profit land trusts are committed to the preservation of our region's natural heritage and scenic beauty. And, most importantly for this column, they protect ample acreage for hiking and outdoor recreation.

Land trusts understand that to make conservation tangible, they need to get people outside and onto the lands that they protect. With an innovative new program that mixes conservation with a little competition, Carolina Mountain Land Conservancy, a Western North Carolina land trust, is doing just that. We went to Peter Barr, an avid hiker and the Trails and Outreach Coordinator for CMLC, to learn more about what they are doing to encourage the synergy between enjoying the land and protecting it.

Hiking the Southern Appalachians to Support Land Protection

By Peter Barr

Since 1994, the Carolina Mountain Land Conservancy has protected more than 23,000 acres of western North Carolina's mountains, including the headwaters of the French Broad River, the Blue Ridge Escarpment and Hickory Nut Gorge.

CMLC's White Squirrel Hiking Challenge — named for the beloved wildlife oddity that can be spotted on some of the conservancy's protected tracts — invites members of the community to get out on protected lands and discover the value of conserving the amazing places in the southern Appalachian Mountains.

Protecting land from sprawling development, subdivision and other threats that damage and divide our mountains has myriad positive impacts — safeguarding clean drinking water, improving air quality and increasing biodiversity.

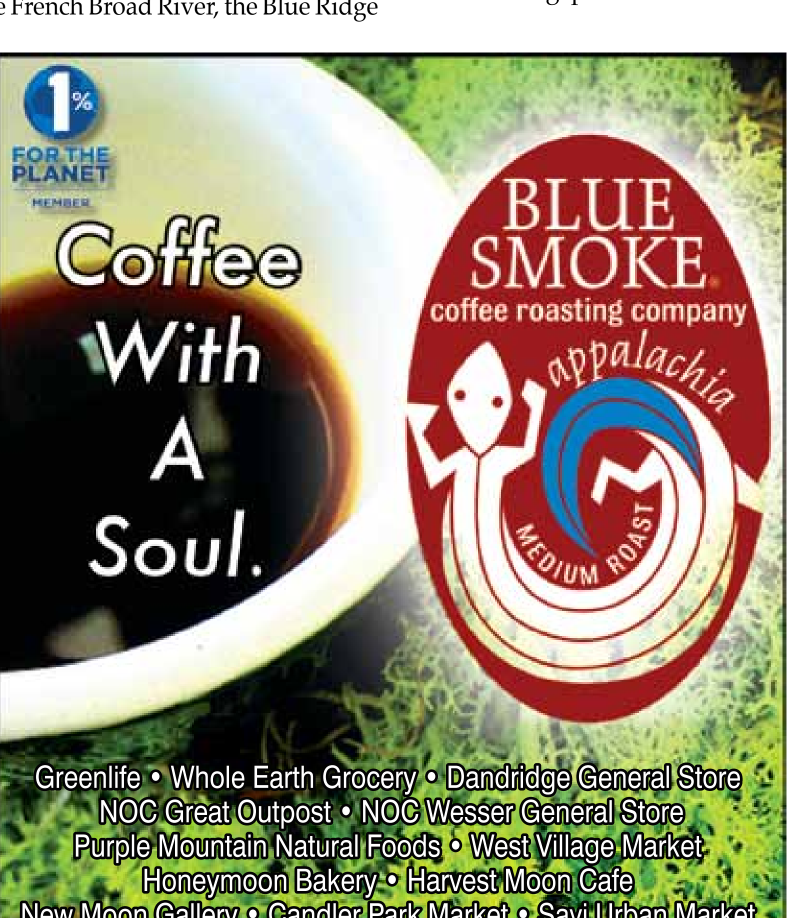
Whether you're an experienced outdoors enthusiast or new to the wonders of nature, the idea is that once you experience these special places for yourself, understanding that they're protected forever, you will become a conservationist for life.

By completing eight hikes on CMLC's most spectacular conserved lands, finishers will earn a white squirrel hiking patch and bragging rights for land conservation. The real reward is experiencing these amazing places, partaking in a little friendly competition, and supporting their permanent protection.

Please note that while most of the hikes included in the hiking challenge are open to the public, a few are on private land. Landowners generously open their property to hikers but request in return that visitors support land conservation by becoming members of CMLC.

For directions to hike trailheads and to enroll in the White Squirrel Hiking Challenge, visit carolinamountain.org/hikingchallenge.

* denotes hike on private land



Photos courtesy of Carolina Mountain Land Conservancy

Florence Nature Preserve

A three-mile hike within CMLC's Florence Nature Preserve in the Upper Hickory Nut Gorge parallels pristine mountain streams, traverses old growth forests and features historic mountain home sites. The Preserve was donated by the Florence family in 1996 and CMLC has retained ownership ever since, maintaining a five-mile network of public hiking trails on its 600 acres.

DuPont State Recreation Forest

Two Hiking Challenge outings entail journeys in the popular DuPont State Forest — which straddles Henderson and Transylvania counties — and celebrate CMLC's origins following the movement to protect the forest in the 1990s.

The "Tour de Falls" hike requires hikers to reach three of DuPont's popular waterfalls: Hooker, Triple and High Falls. The three falls—among the most beautiful in the region—can be reached with a round-trip hike of less than three miles.

Another hike, a two and a half mile jaunt to the summit of Stone Mountain, makes up for the ease of the waterfalls tour. But the climb up a steep trail rewards hardy hikers with panoramic views from the top of one of DuPont's scenic granitic domes.

Once imminently threatened by development, the forest's abundant natural beauty is now adored by hikers, cyclists and equestrians alike. A grassroots coalition of conservation supporters in the 1990s ultimately saved DuPont and facilitated its purchase by the state of North Carolina to become public land. CMLC's support of the forest's conservation was one of its first land protection initiatives.

CMLC protects DuPont to this day, by buffering its borders with private conservation easements and facilitating the acquisition of additional land — including 65 acres added to the forest in April.

Uncles Falls at Green River Preserve *

Tucked away in a hollow within Henderson County's Green River Preserve, Uncles Falls requires a hike of only two miles round-trip. Totaling more than 3,000 acres, and one of the largest private conservation easements in western North Carolina, the preserve is home to a co-ed summer camp that thrives on experiential learning by connecting kids to nature.

More than 2,600 acres of unspoiled forests and rugged mountain slopes at Green River Preserve are conserved by CMLC — including the headwaters of the Green River. Summer campers use Uncles Falls for a ritual of initiation during their stay — jumping underneath the cascade with their clothes on and shouting the words "polar bear" three times. While the ritual is not a requirement of the Hiking Challenge, it is highly recommended for an invigorating extra dose of nature.

Connestee Falls

A hike to Transylvania County's Connestee Falls — quite literally a walk in the park — is the easiest in the Challenge and illustrates that not all beautiful natural features require a grueling trek to find enjoyment. A new wheelchair accessible boardwalk, compliant with the Americans with Disabilities Act, stretches fifty yards from the parking area on U.S. 276 south of Brevard, N.C., to an overlook platform that offers views of three picturesque waterfalls. Connestee Falls, one of the region's most popular cascades, and Batson Creek Falls converge to form a third falls known as Silver Slip. All three waterfalls are part a conservation easement obtained by CMLC, which also facilitated the property's purchase by Transylvania County and its establishment as a county park.

Bearwallow Mountain

Bearwallow Mountain may be the crown jewel of the White Squirrel Hiking Challenge. The hike ascends a one-mile trail — constructed by CMLC with the help of volunteers — to the summit of a 4,000-foot mountain on the Eastern Continental Divide. The peak hosts an expansive grassy meadow that offers a near-360 degree view to reward hikers who make the short climb. A CMLC conservation easement protects 81 acres atop the peak to date and CMLC is working to conserve nearly 400 more.

The trail up Bearwallow Mountain is part of a developing network of trails in the Hickory Nut Gorge that will link a growing network of conserved lands — including lands protected by Southern Appalachian Highlands Conservancy and Chimney Rock State Park. Ultimately, the network will encompass more than 50 miles of trails and span the length of the breathtaking Hickory Nut Gorge.

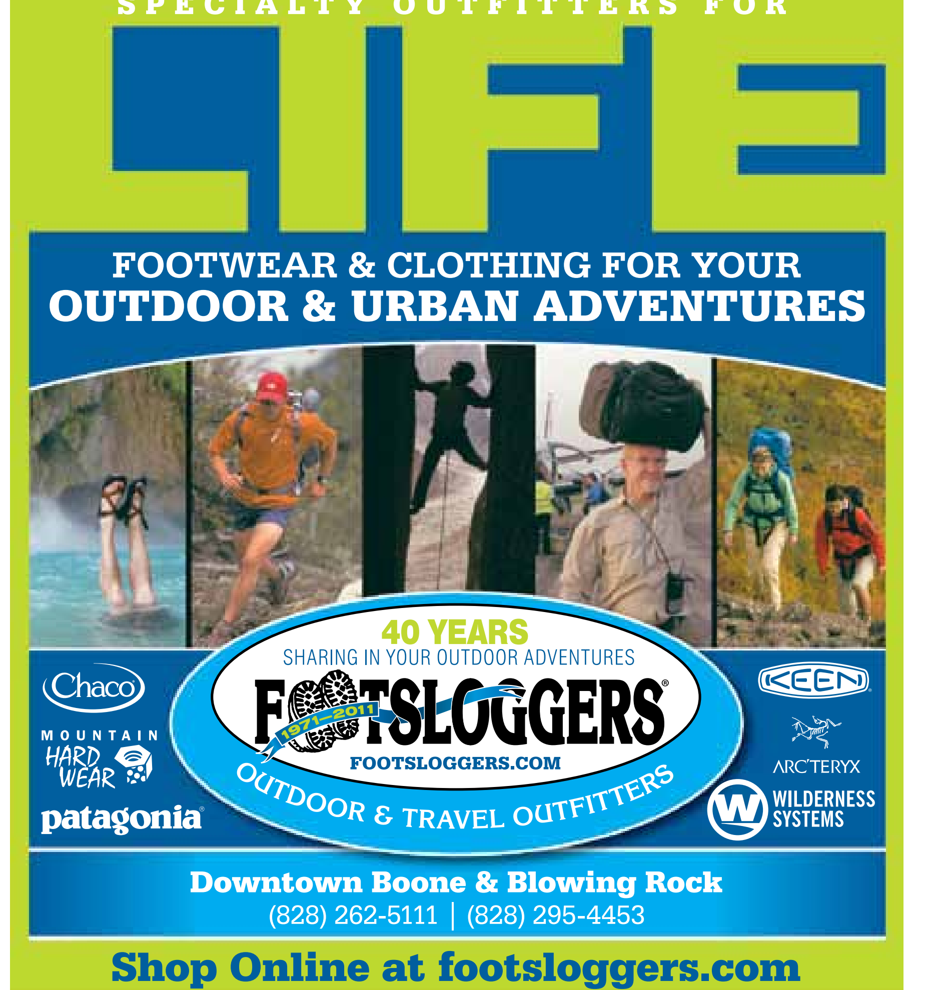
Photos courtesy of Carolina Mountain Land Conservancy

Kens Rock/Weed Patch Mountain *

Ken's Rock, an impressive cliff on the west face of Youngs Mountain near Lake Lure, can be reached by just a half-mile hike. Located on private property, the landowner permits access one to two weekends a month for hikers that support land conservation. The dramatic view from the rock includes Weed Patch Mountain, a 1,500+ acre tract purchased by CMLC from bankruptcy court following failure of a gated housing development. The Weed Patch tract is contiguous to part of Chimney Rock State Park; CMLC and the Town of Lake Lure are developing an extensive hiking and mountain biking trail network on the property.

East Fork Headwaters - Foothills Trail

One of the largest remaining privately-owned tracts of land in the southern Appalachians, the East Fork Headwaters property hosts miles of trout streams, rare mountain bogs and federally endangered plants and animals. Its permanent protection is still a work in progress — to date, nearly 800 acres have been put into conservation ownership. For the Challenge, hike four miles along the venerable Foothills Trail — a long-distance hiking path which traverses the Blue Ridge Escarpment on the border of North and South Carolina.



Naturalist's Notebook

American Chestnut: Return of the Forest King?

By Molly Moore

When Daniel Boone traveled through Appalachia, the tall trunks and sweet nuts of the American chestnut flourished. But to most modern residents, stumbling across a full-size American chestnut in the woods is as likely as spotting an eastern cougar. Unlike the cougar, however, the chestnut is making a comeback.

During the American chestnut's golden age, the tree was prized for its straight-grained wood. The deciduous giants flowered in summer, leading to reliable, copious nut yields that fed mice, squirrels, turkey, deer, bears, people and livestock.

But in 1904, a forester at New York's Bronx Zoo saw an unfamiliar orange fungus on some of the zoo's chestnuts — the trees soon died, and the fungus rapidly spread. What became known as the chestnut blight traveled at a rate of 30-50 miles per year, carried by humans to other areas.

"People felt like the forests were dying because about 25 percent of the canopy cover of the forest was American chestnut," says Michael French, a forester with The American Chestnut Foundation. By the 1950s, about 4 billion trees were lost across the East.

The Asian fungus enters through a wound in the bark, cutting off the tree's circulation and killing everything above ground. The roots, however, survive to foster a new generation of sprouts. These young trees can live for decades in the understory and can grow 10 feet during the first year of ample sunlight, but because of that growth they also develop a mature tree's gnarly bark. That bark increases the tree's susceptibility to blight, and the process starts over.

To restore this magnificent tree, in 1983 The American Chestnut Foundation began breeding the stately but vulnerable American chestnut with its crooked but blight-resistant Chinese cousin. The half-and-half trees were again crossed with an American parent, resulting in trees that were 75 percent American. As those trees grew, they were challenged with the blight to see which inherited strong Chinese disease resistance. Trees with high resistance and good American characteristics were crossed with another American parent. Researchers repeated this Darwinian process to create trees that are 15/16 American, with leaves and timber qualities similar to pure Americans.

Two of these trees were intercrossed, and the best of their offspring open-pollinated. Those seedlings are now being introduced to the rigors of the real world.

"We're not going to stop at this stage, we intend to increase the blight resistance and American characteristics in our trees, but we also want to get these trees back out there as quickly as possible," French says. The American Chestnut Foundation plans to breed three more generations to create trees with over 99 percent American character.

But the foundation has another introduced pathogen to tackle. Chestnuts in the Piedmont of North and South Carolina began dying in the mid-1800s, and when the organization's Carolinas chapter tried planting hybrid chestnuts in 2001, most of them failed due to a water mold called *Phytothphora* that causes root rot. Luckily, some Chinese chestnut families are also resistant to *Phytothphora*, so researchers don't need to start from scratch in their attempt to establish a fleet of trees that can thwart both blight and root rot.

In Adair County, Ky., scientists pollinate a pure American chestnut tree that will parent backcross chestnuts. The tree is a rare survior of the chestnut blight. Photo courtesy of Micheal French.

The ultimate test for the backcross chestnuts is whether they can propagate when faced with forest competition. A Conservation Innovation Grant from the USDA Natural Resources Conservation Services will help fund the planting of approximately 250,000 hardwood seedlings, including more than 14,000 potentially blight-resistant American chestnuts on 12 former surface mines in Pennsylvania, Ohio, Virginia, West Virginia and Kentucky by 2014.

Reclaiming surface mines is complicated, and meaningful reforestation is a rarity on the 2,300 square miles of Appalachia that have been surface mined. But a forestry reclamation technique developed in the mid-2000s shows promise on the 15 square miles where it's been applied, and more land is permitted for this type of reforestation. With this grant, the chestnut foundation can partner with mining companies on active mine sites and work with landowners in places where reclamation is complete but reforestation unsuccessful.

People tried to stop the blight from spreading by cutting down hundreds of miles of chestnut trees. The containment effort failed. Photo courtesy of the Great Smoky Mountains National Park Library.

Including hybrid chestnuts in reforestation efforts will let researchers see how the trees fare in different areas and in competition with other species. If the trees pollinate well, these plantings will help spread the chestnut across its former ridgetop range. French is also hopeful that well-drained mine spoils might make conditions more difficult for *Phytothphora* root rot.

In April, the chestnut foundation and a host of partners and volunteers completed a planting on 22 acres of a former surface mine in Schuylkill County, Pa. The site, the first of its kind funded by the new grant, now boasts more than 1,000 backcross chestnuts among its hardwood seedlings. The foundation has enough young trees to plant five more sites in 2013.

The project's results, however, won't be certain for 80 to 100 years. "We won't know how successful we were until we have chestnuts back out there in the forest reproducing and taking care of themselves," French says.

This is OUR LAND

Imagining a Land Ethic for a New Era

By Brian Sewell

Image from the National Archives and Records Administration

Whether it's one of Ansel Adam's iconic images — like this one of the Snake River (above) winding through the Grand Tetons — or an essay by Aldo Leopold (left), works inspired by the American landscape and love of the land inspire the conservationists in us all.

There is no shortage of writers who have made the case for conservation and abundant public lands in which all Americans can take pride. It was Wallace Stegner, the historian and environmentalist, who said that "National Parks are the best idea we ever had. Absolutely American, absolutely democratic. They reflect us at our best rather than our worst." Writing from a distinctly American perspective, Stegner and others reinvigorate our commitment to conservation.

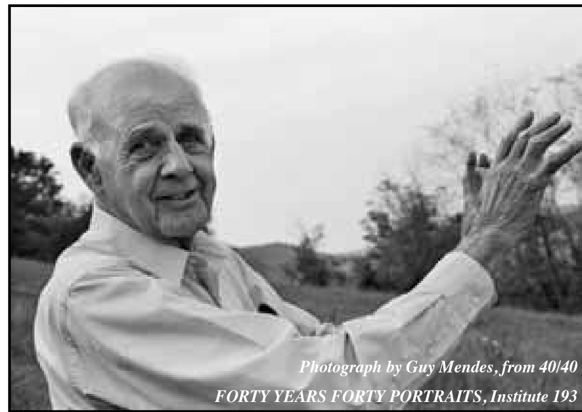
We read them intently. Then we go outside. With their wisdom in mind, if not a physical collection of essays or poetry tucked away in our backpacks, we can contemplate why we've made public lands such a priority. After all, the landscape itself offers no shortage of inspiration.

Photo Courtesy of U.S. Forest Service

For more than a century, Americans have enjoyed the benefits of the country's public lands — national and state parks, wilderness areas, national forests, nature preserves, and all the land maintained by government agencies and owned by us all. This includes 85 million acres managed by the National Park Service and 193 million acres of forests and grasslands managed by the U.S. Dept. of Agriculture under the Forest Service.

Echoing Aldo Leopold, the visionary conservationist who asserted that "a land ethic changes the role of Homo sapiens from conqueror of the land-community to plain member and citizen of it," America's protected lands serve as a refuge and respite to one of the most urbanized nations on earth — as of 2008, 80 percent of Americans live in cities.

It's understandable then, that we turn to literature written out of love for the land or stare in wonder at the photography of Ansel Adams — even a black and white image of Yosemite Valley or the Grand Tetons inspires the conservationist in us all.



Photograph by Guy Mendes, from 40/40 FORTY YEARS FORTY PORTRAITS, Institute 193

"For humans to have a responsible relationship to the world, they must imagine their places in it," said Wendell Berry, a writer synonymous with the spirit of Appalachia, when he delivered the National Endowment for the Humanities' 41st Jefferson Lecture in April. "To have a place, to live and belong in a place, to live from a place without destroying it, we must imagine it. By imagination we see it illuminated by its own unique character and by our love for it." The benefits of conservation and maintaining our public lands are far from imagined. Nationwide, recreation on public lands is on the rise, and recreation tourism generates hundreds of thousands of jobs and contributes to every aspect of the local, often rural, economies that border them.

Despite broad support for public lands, however, some elected leaders have proposed stripping areas of their wilderness designation, and have advocated for increased leasing of public land for energy development, and even selling our national parks.

For decades, Wendell Berry's writings and activism have spoken to the spirit of Appalachia. As the 41st Jefferson Lecturer of the National Endowment for the Humanities, Berry asks us to "Imagine our place in the land," and remember why conservation is central to preserving the American dream. Photos liscensed under Creative Commons.

In the foreword to A *Sand County Almanac*, published in 1949, Leopold wrote that, "We abuse land because we regard it as a commodity belonging to us. When we see land as a community to which we belong, we may begin to use it with love and respect." Evident from our fascination with our protected, public lands, Leopold's notion of extending our ethic to include the land community continues to capture our imagination.

In This Issue

In this land-inspired issue of The Appalachian Voice, we contemplate the importance of conservation and the value of public lands by looking at the past and pondering the future. Trace the roots of the conservation movement and consider its place today (**p. 10**); learn how climate change could impact the forests and wildlife habitats of Central and Southern Appalachia (**p. 12**); meet a few of the men and women of our region who have dedicated themselves to land protection and conservation (**p. 18**); and read about the audacity of extractive industries and how, in the pursuit of profit, even private property rights can come under attack (**p. 20**).

Beginning on page 13, you'll find a special 4-page insert exploring a handful of the treasures hidden throughout the public lands of Appalachia. Pull it out, share it with your friends, pick your favorites and enjoy the extraordinary public lands of our region.

Rooted The Evolution of America's Conservation Movement

"Wilderness is not a luxury but a necessity of the human spirit."
Edward Abbey, The "Thoreau of the American West" in Desert Solitaire

By Brian Sewell

In 1963, when the first woman to receive the Audubon Award for achievements in conservation accepted the honor, she said that "Conservation is a cause that has no end. There is no point at which we say, 'Our work is finished.'" She is widely considered the mother of modern-day environmentalism. But long before Rachel Carson wrote her groundbreaking book, *Silent Spring*, she saw herself as a daughter of the conservation movement.

Largely as a response to the growing pains of the Industrial Revolution, a national approach to land and resource conservation took root at the turn of the 20th century. The rapid industrialization of America led not only to the rise of the middle class, but also to a skyrocketing population thirsty for natural resources and a rise in air and water pollution.

Between 1905 and 1916, the creation of the National Parks Service, the U.S. Forest Service and the passage of the Antiquities Act, which gave the president the authority to designate land as national monuments, affirmed that America's conservation movement would continue far into the future.

The era that solidified America's conservation principles, however, was also a time of public trust in government, bipartisan cooperation and staunch regulation of business — a reality far from the America of today. The economic recession of 2008, growing national debt and globalized markets for America's natural resources have created unprecedented challenges to land conservation and led some to argue for stripping wilderness designations from already protected tracts and opening public lands to timbering, mining and other forms of industrial development.

In truth, the American conservation movement has spanned the nation's history — Lewis and Clark wrote of the land's majesty in their letters to Thomas Jefferson. In the mid-nineteenth century, American wirters and artists, such as Albert Bierstadt, drew inspiration from the landscape, stimulating a popular movement of nature appreciation (above: Bierstadt's Among the Sierra Nevada Mountains*, from the Smithsonian American Art Musuem).*

Still, the public's commitment to conservation remains strong. In 2009, during the depths of the recession, more than 80 percent of the public supported using revenue from offshore drilling permits to fund the federal Land and Water Conservation Fund — the primary source of money allocated to create and maintain public lands. Last year, the majority of North Carolina voters said they would rather pay a higher sales tax than cut funding to parks and public spaces.

To groups ranging from community land trusts to national advocacy organizations, conservation remains a cause with no end.

An American Tradition

By the mid-1800s, the seeds of the conservation movement had been planted. The leading transcendentalist, Henry David Thoreau, proclaimed in 1851 that "in Wildness is the preservation of the World." Painters of the Hudson Valley School, such as Thomas Cole and Albert Bierstadt, were creating works inspired by the grandeur of the American landscape. And somewhere in mid-century Manhattan, an inauspicious boy was developing the interests that would lead him to become the most celebrated conservationist in the nation's history.

In 1901, Theodore Roosevelt became the 26th President of the United States, and the first American leader to make conservation a cornerstone of his domestic policy. To Roosevelt, conservation was not an option but an ethical imperative. During his presidency, he created 53 wildlife refuges, signed legislation establishing five national parks and appointed the National Conservation Commission to inventory America's natural resources. By the end of 1906, the year Roosevelt signed the Antiquities Act into law, he had created four national monuments.

Groups advocating for the protection of public land and the responsible management of natural resources continue to praise Roosevelt and the early conservationists for their foresight. "They set aside these places because they knew it was good for the country," says Jim DiPeso of ConservAmerica. "Roosevelt said that conservation is a great moral issue. It's for everyone and it's part of the legacy that we should hand off to future generations."

ConservAmerica was founded in 1995 after a Republican-led Congress set its sights on undermining bipartisan environmental laws, especially the Clean Air Act and the Clean Water Act. The mission of the non-profit organization is to resurrect the Republican Party's tradition of conservation exemplified by Roosevelt.

"Things were getting a bit crazy in those days," DiPeso says of the political climate that encouraged the creation of ConservAmerica, then known as Republicans for Environmental Protection. "Our founders felt this was not the reason why people had voted for Republicans in the first place. They were going after laws that had broad public support and had accomplished a lot in protecting the quality of the environment."

Despite unflagging public support for conservation, groups like Conser-

Rooted

Continued from previous page

vAmerica are finding themselves on the defensive.

One piece of legislation in particular has mobilized conservation groups to emphasize the importance of conservation to the nation's past, present and future. The Wilderness and Roadless Area Release Act (H.R. 1581), introduced in 2011 by California Congressman Kevin McCarthy, would open approximately 60 million acres of roadless areas in national forests and wilderness study areas to industrial development.

While western states would be the most heavily impacted — nearly 9 million acres of protected wilderness would be up for sale in Alaska — Appalachian states would stand to lose protections on more than 800,000 acres of national forests, including large swaths of Virginia's George Washington National Forest. The Wilderness Society, seeing H.R. 1581 as being unfaithful to America's tradition of conservation and public land protection, has taken to calling it the "Great Outdoors Giveaway."

"I think [H.R. 1581] is really out of touch with the American people," says Paul Spitler, The Wilderness Society's director of wilderness policy. "Americans support public lands overwhelmingly. They support wilderness areas and parks overwhelmingly."

When it passed in 2001, the Roadless Rule that now protects the 60 million acres at risk came under immediate attack in Congress. The Forest Service received more than 2.5 million citizen comments on the rule, almost all in favor of complete roadless protection.

In 2005, after the Bush administration repealed the Roadless Rule, the Pew Environment Group's Heritage Forests Campaign garnered support from a bipartisan collection of governors who endorsed the full protection of roadless areas in their states. By September 2006, a federal district court had reinstated the rule.

The Wilderness Society is familiar with the pendulum swings of support for conservation in government. Before it was signed by President Lyndon Johnson in 1964, the Wilderness Act went through 66 drafts. In one of his many appearances before Congress,

Photo courtesy of the Leave No Trace Center (www.LNT.org)

the legislation's author and longtime executive director of The Wilderness Society, Howard Zahniser, said, "Civilization's ambition can encompass wilderness protection. And so sublimated, it can make preservation a prevailing purpose. We maintain the gallery of art, even though few use it." Zahniser died a few weeks later, just months before his landmark legislation became law.

Moral appeals for conservation in the tradition of Thoreau, Roosevelt and Zahniser have sustained the American conservation movement thus far. To ensure its continuation, however, today's supporters are beginning to realize that economic arguments must match the power of moral ones.

Saving for the Future

In a 2010 memo to his cabinet members simply titled "America's Great Outdoors," President Barack Obama announced a new initiative to "develop a conservation agenda worthy of the 21st Century."

"Despite our conservation efforts," the president wrote, "too many of our fields are becoming fragmented, too many of our rivers and streams are becoming polluted, and we are losing our connection to the parks, wild places, and open spaces we grew up with and cherish."

Central to President Obama's America's Great Outdoors initiative is the promotion of existing programs connecting Americans with their nation's parks, with the federal Land and Water Conservation Fund at the front of the line.

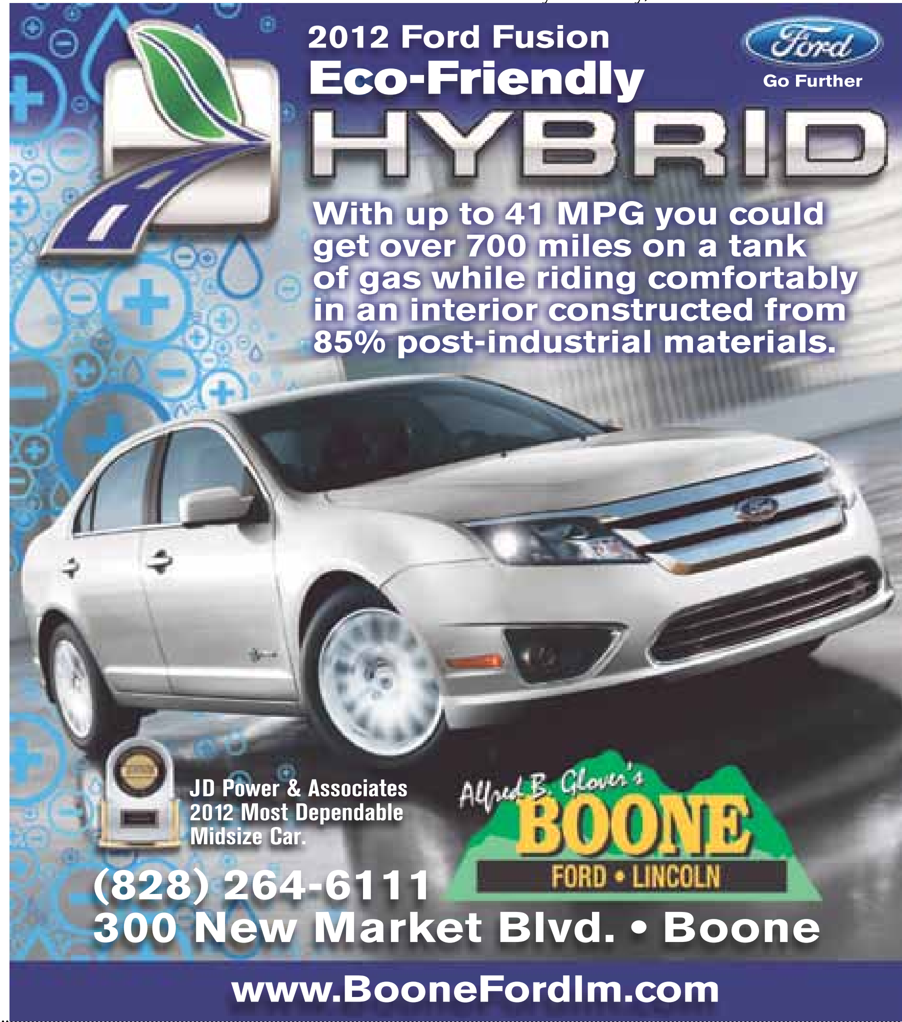
Created in 1965, the LWCF provides funds to land and water protection projects to benefit all Americans, including everything from national parks to local playgrounds. The Trust for Public Land, a nonprofit conservation group, found that for every dollar invested in projects with funds from the LWCF, communities received a four dollar return. Rather than being funded by taxpayer dollars, the $900 million appropriated to the LWCF comes from oil and gas drilling fees, though Congress typically diverts the majority of these funds elsewhere — shortchanging the LWCF by some $17 billion since its creation.

Last year alone, $33 million in grants were awarded to 198 parks, protecting 33,432 acres and contributing to the outdoor recreation industry that generated $730 billion and supported 6.5 million jobs. Some in Congress, however, still target the LWCF claiming it does not support job growth, a trend that continues to baffle DiPeso.

"Protecting the environment does not have to come at the expense of the economy," DiPeso says. "In fact, protecting the environment can confer economic advantages if we just sit down and think about it."

If anything, conservationists believe the economic benefits of land protection are underestimated since they will last far into the future. Spitler, for one, believes that there is a moral argument for the creation and maintenance of public lands that still holds weight: future generations.

"They'll thank us for them," he says. "When future generations look back on how we've behaved in these current times I don't think they'll say 'Gee, you saved too much for us.' If they criticize us they will say, 'You saved too little.'"



Last Stand for the Southern Spruce-Fir?

Ancient Mountaintop Species Are Most Vulnerable As Appalachia Warms

By Molly Moore

At the nonprofit park atop northwestern North Carolina's Grandfather Mountain, Director of Education Jesse Pope surveys the park's cold-loving plants, keeping an eye out for the brassy Weller's salamander and small Saw-whet owl, two of the many creatures that depend on the mountain's cool climate. Pope is monitoring how Southern Appalachia's high elevation red spruce and Fraser fir respond to rising temperatures. These high-elevation forests — remnants of the last ice age that require a similar climate to forests much farther north — are essentially islands in the sky. If temperatures continue to climb, residents of these habitat islands have nowhere to go.

Though this year's balmy winter alone doesn't signify climate change — the term "climate" refers to weather patterns over long periods of time — the fact that April 2012 marked the end of the warmest 12-month period since 1895 means that recent weather can help people imagine what a new climate norm in Appalachia might look like. Nine of the ten warmest years since 1880 have occurred since 2000, and 2012 is on track to set a new record.

These measurements are consistent with a consensus of three key facts by international climate scientists: the Earth's surface temperature is rising; widespread climate-related impacts are occurring now and are likely to increase; and it's more than 90 percent likely that humans are responsible.

Scientists agree that Southern Appalachian forests will be warmer in the future, but detailed projections future climate are fuzzy because rates of greenhouse gas emissions are uncertain.

Ironically, some forms of pollution might be sheltering Appalachia from experiencing the climate impacts that are already visible in some other parts of the country. Dr. Steve McNulty, an ecologist with the Eastern Forest Environmental Threat Assessment Center, says that the airborne sulfate aerosols that were coming into the Southern Appalachians from power plants in the Midwest kept sunlight from coming in and warming the South in the same way that a leafy tree canopy provides cool shade on a hot day. Unlike carbon dioxide, which traps heat in the atmosphere, sulfur aerosols reflect sunlight back toward space.

As temperature rises, it could change everything from fog frequency to soil properties. The resiliency of red spruce and Fraser fir, like these on Clingmans Dome in Sevier County, Tenn., will affect the forest's rare inhabitants. Photo by Brian Stansberry

Since the passage of the Clean Air Acts in the '90s, sulfate aerosols have decreased, so most of the South is beginning to warm up like the rest of the country. But according to Dr. Howard Neufeld, a biology professor at Appalachian State University, the Southern Appalachians haven't seen this temperature increase yet, possibly because aerosols naturally emitted by trees are reflecting radiation out of the atmosphere the same way sulfate aerosols did in the past.

A (Not-so) Foggy Forecast?

While the Intergovernmental Panel on Climate Change accepts higher average temperatures as inevitable, some research models for Appalachia predict an increase in precipitation and others tell of impending drought. Much of this uncertainty centers around clouds. How temperature affects cloud height and cloud type, and whether clouds form more or less frequently, could influence everything from stream flow to plant health.

Clouds have added significance for Appalachia's most vulnerable ecosystem, the high elevation red spruce and Fraser fir forest that cling to the coolest locations in the southern mountains. According to Dr. Neufeld, the spruce and fir trees that anchor these ecosystems have a harder time drawing water up their trunk than hardwoods do. The moisture in fog gathers on the conifers' needles, forming droplets that run down the trunk to provide about a third of the tree's hydration. If climate change causes clouds to rise, these trees risk losing a key water source while suffering increased exposure to the sun's drying rays.

Southern Appalachia's spruce and fir forests are home to numerous rare and endangered species dependent on these old growth sites. The extremely endangered spruce-fir moss spider, one of the world's tiniest tarantulas, lives only in moss mats found in a few of these high-elevation coniferous forests. A subspecies of northern flying squirrel that dines on a truffle from red spruce roots has been genetically isolated in the region since the glaciers receded about 10,000 years ago.

As the continent warmed after the last ice age, the South's spruce and fir migrated upward in elevation. A journey to the summit of Grandfather Mountain in North Carolina follows the conifers' path. The forest changes from leafy hardwoods lower down to a mix of hardwoods and spruce. Above 5,000 feet, spruce and fir take over; if Grandfather were as tall as nearby Mt. Mitchell, Fraser fir alone would dominate above 5,800 feet. According to Pope, regional researchers estimate that a two-degree increase in temperature could shift forest zones upward by 1,000 feet. Depending on the degree of warming, firs, and maybe even spruce, could be pushed off the top of the mountain.

Careful observation of how spruce at the southern limit of their habitat respond to warming will be helpful for land managers in the Central and Northern Appalachians, Pope says. The climate change

Continued on page 13

Photo by Jesse Pope

Photo by Jacob Fields

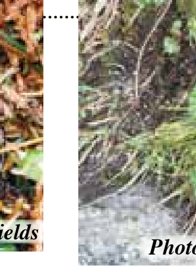


Photo by Molly Moore

Forest management decisions can help some species adjust to habitat changes. A saw-whet owl (left) peers out of a nesting box on Grandfather Mountain, N.C. The endangered Weller's salamander (center) lives at a few high elevations in Virginia, North Carolina and Tennessee. The ancient spreading avens (above right) lives on sheer cliffs; its most commonly known cause of death is being crushed by falling ice sheets. Researchers do not know whether the plant is still reproducing.

Hidden TREASURES

Welcome to part two in our exploration of the most amazing places in the Central and Southern Appalachian Mountains — this time exploring some of our most fabulous Public Lands. Take this pull-out section with you as you explore the Hidden Treasures of our alluring, iconic and cherished Appalachian Mountains, and keep watch for our August issue and some Water-specific hidden treasures to cool off the dog days of summer. *Stories by Madison Hinshaw, Jillian Randel, Jamie Goodman and Molly Moore*

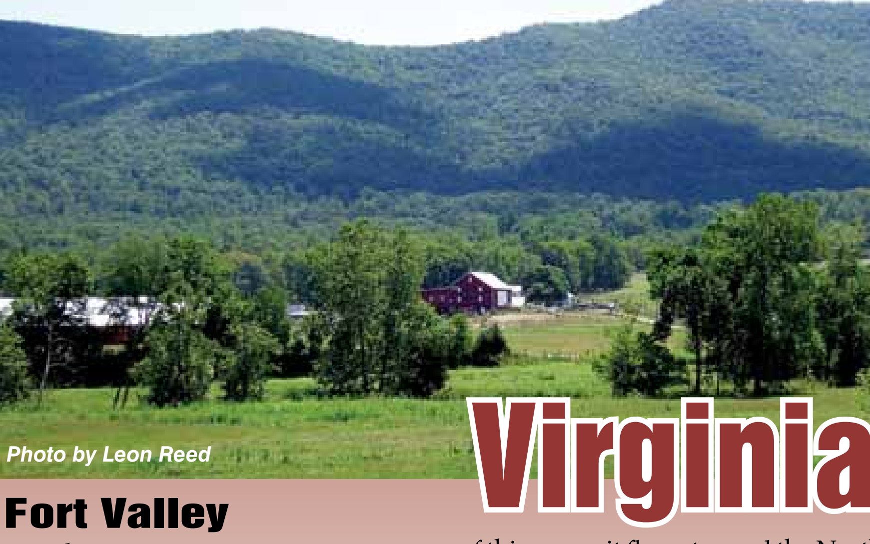


Photo by Leon Reed

Virginia

Fort Valley

This quaint locale is best described as a "valley within a valley." Tucked away in the heart of Shenandoah County, Va., Fort Valley sits amidst the Massanutten mountain range. In all, the valley is 23 miles long, but it is never wider than three miles.

The primarily agricultural valley is closed in except for a narrow gap on the northern side that opens for a road initially built during the Revolutionary War at George Washington's command. Passage Creek also makes use of this gap as it flows toward the North Fork of the Shenandoah River, boasting a reputation for trout and, when the water level is high enough, paddling.

Local outdoor-oriented businesses make use of the surrounding George Washington and Jefferson national forests by offering activities like guided horseback riding. The area also has mountain biking and hiking trails and several state and private campgrounds. -- MM

MORE INFO: Located in Shenandoah County, Va. Visit: virginia.org/Cities/FortValley

McAfee Knob

Pick up an Appalachian Trail calendar and you're sure to find a breathtaking snapshot of the iconic McAfee Knob. An enormous rock slab juts out of a rock face from one of the world's oldest mountain formations, giving the hiker a striking view of much of Virginia's Appalachian Mountains.

The knob, which has an almost 270 degree panorama of the Catawba Valley, North Mountain, Tinker Cliffs and the Roanoke Valley, sits alongside the Appalachian Trail in Catawba, Va.

A four-mile hike with a steady climb of nearly 1,300 feet from the VA311 parking lot along the AT classifies this trail as a definite "calf-burner." Wildlife is abundant on the hike up to McAfee Knob, with white-tailed deer, eastern fence lizards and even the rare American chestnut (see p. 8) just a few of the flora and fauna that may be seen on the hike.

McAfee Knob is a frequent stop for AT hikers, and during the spring and summer months you may have the opportunity to meet thru-hikers and learn about their time on the trail.

Two campsites on the trail provide excellent base camps from which to watch the sunset or wake up early and catch the sunrise from the knob.

Visit during the weekdays to avoid the crowds, and when the forecast is sunny and inviting. Be sure to have a buddy photograph you on the knob. It's well worth it. -- MH

MORE INFO: 30 minutes outside of Roanoke on VA 311. Visit: roanokeoutside.com/mcafee-knob-trail

Photo by Freyda Strackeljahn

West Virginia

Droop Mountain Battlefield State Park

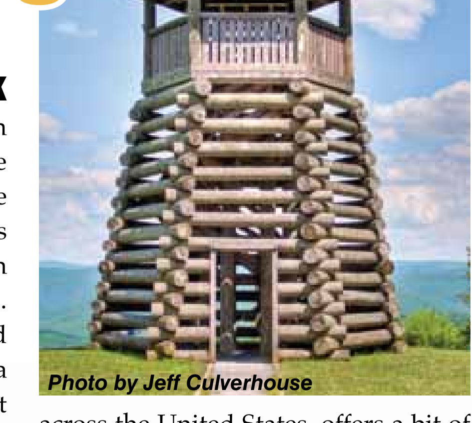


Photo by Jeff Culverhouse

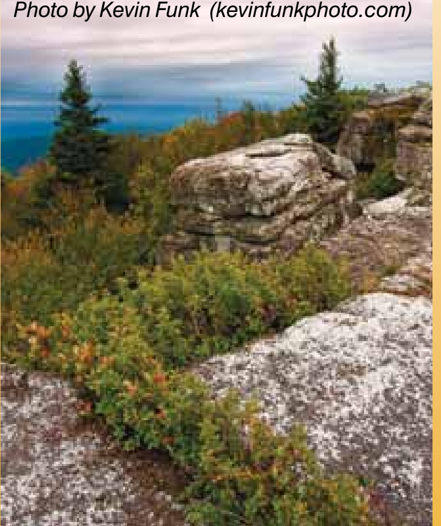
Droop Mountain Battlefield, in the Greenbrier River Valley, is home to West Virginia's last civil war battle scene. A system of hiking trails brings visitors to a natural spring, mountain bog, pump house and a series of caves. Hiking trails are less than one mile and range from easy to strenuous, and a Civilian Conservation Corps-built museum and lookout tower still stand by the battlefield. The park also offers reenactments of the battle during the month of October. Droop Mountain, part of the Civil War Discovery Trail linking more than 600 Civil War sites across the United States, offers a bit of history and adventure for hikers seeking a unique way to get outside. -- JR

MORE INFO: Located on Route 219, 15 miles south of Marlinton and 27 miles north of Lewisburg. Visit: droopmountainbattlefield.com

Bear Rocks Preserve

Once damaged by major logging and extensive fires, Bear Rocks Preserve is now a recovering ecological preserve. Located on the Dolly Sods Plateau, this 477-acre expanse of subalpine landscape overlooks surrounding valleys with a view that can stretch as far east as the Shenandoah National Park. Although deforestation has left much of the plateau treeless, Bear Rocks Preserve is sketched with stunted red spruce and barren shrub species characteristic of subalpine zones.

Photo by Kevin Funk (kevinfunkphoto.com)

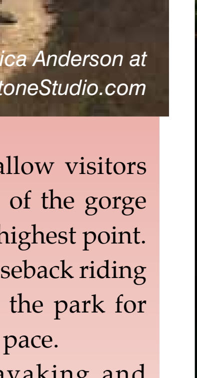


Recovery efforts through The Nature Conservancy of West Virginia have encouraged growth and, as a result, plant life is abundant during the spring and summer. Trails take hikers past blueberry, huckleberry, mountain laurel and azalea bushes. Abundant wildlife roams the preserve — including black bear, white-tailed deer and bobcat. The plateau is home to cranberry bogs and giant boulders that offer the perfect lookout point for migrating hawks, falcons, songbirds and other sky-bound species. As recovery continues, efforts focus on reforesting once-abundant red spruce, protecting lands surrounding the preserve, and acquiring 15,000 acres of coal rights to transfer them to the Forest Service. The subalpine zoning provides a habitat to plants and animals normally found much further north, truly making this one of West Virginia's most precious treasures. -- JR

MORE INFO: Located in the Potomac Ranger District of Monongahela National Forest. Visit: nature.org

Hidden TREASURES of Appalachia

Photo byJessica Anderson at WhetstoneStudio.com



Kentucky

Breaks Interstate Park

Approximately 250 million years in the making, Breaks Interstate Park is one of the deepest gorges in the U.S. The centerpiece is a 1,650 foot deep abyss, the largest east of the Mississippi River, and establishes a well-suited nickname for the park -- the "Grand Canyon of the South."

For millions of years, the Russell Fork River, a tributary of the Big Sandy, has cut through the compact sandstone of Pine Mountain, creating the breathtaking five-mile Breaks Canyon that bisects the park today.

Breaks Interstate Park sits on more than 4,500 acres of the Appalachian Mountains along the Kentucky and Virginia border, making it one of only two interstate parks in the country. The park has more than 12 miles of hiking and walking trails that allow visitors to access the depths of the gorge or take in views from its highest point. Mountain biking and horseback riding trails are maintained by the park for those who prefer a faster pace.

In recent years, kayaking and whitewater rafting the Russell Fork has become a sensation. Depending on the release from the John W. Flannagan Reservoir, rapids range from Class 2 to Class 5 in difficulty, with some of the most challenging rapids found in the Breaks gorge.

At the end of the day, the lodge offers 34 rooms with balconies overlooking the Appalachian Mountains. If you prefer a more traditional overnight stay, a 122-site campground awaits with full hook-ups for RVs. -- MH

MORE INFO : Located about 27 miles east of Pikeville, Ky. Visit: breakspark.com

White Hall

Once home to the newspaper publisher, emancipationist and Muhammad Ali namesake, Cassius Marcellus Clay, the White Hall mansion is a little piece of history hidden deep within Madison County, Ky. This 44-room Georgian and Italianate-style mansion built in the late 18th century has been recognized for its modern features of the time — boasting indoor plumbing, central heating and 10,000 square feet of heirloom furnishings. Green Clay, one of the wealthiest landowners and slaveholders in Kentucky, first built the home for his family in 1798. Clay's youngest son, the colorful and decidedly anti-slavery Cassius Marcellus, inherited the home and added on to it in the 1860s. His daughter, Laura Clay, was the first woman nominated for president by the Democratic National Party in 1920. Members of the Clay family donated the home to the state of Kentucky in 1968; in 1971, after significant reconstruction, the home was opened as a historic site. -- JG

Photo by Kentucky Department of Parks

MORE INFO Located 8 miles from Richmond, Ky., on I-75 N. Visit: parks.ky.gov

Tennessee

Photo by Brad Kennedy

Fiery Gizzard Mountain

Located in the heart of the South Cumberland Plateau, Fiery Gizzard Mountain remains one of the most pristine landscapes in the Eastern United States. At 12.5 miles long, the trail climbs and descends through Fiery Creek Gorge and is considered one of the most diverse and difficult treks in the area.

Despite its unique allure, the mountain was under threat for a long time. Almost half of the trail and many of the most cherished views were owned by a private timber investment firm; it was not until recently that more than 6,200 acres of the mountain came under full protection and were made public for all to enjoy.

The trail starts out at the Grundy Forest Day Loop and follows the Fiery Gizzard Creek for five miles through rugged terrain, but the pristine landscape makes the jaunt worth the effort. At Raven's Point, there is a chance to camp and extend your enjoyment of the spectacular views. Continuing to Foster Falls, the elevation gain eases up for several miles only to pick back up when you reach Laurel Branch Gorge at the 9.7 mile mark before easing off again. Beautiful overlooks, waterfalls and swimming holes make Fiery Gizzard a must-hike, but be sure you are in top shape before setting out.

Storytellers debate on how Fiery Gizzard got its name. Some legends say the mountain was named after Davey Crockett burned his tongue feasting on a turkey gizzard with local Native Americans. Other legends tell that a Native American chief ripped the gizzard from a turkey and threw it into the campfire to get the whites' attention during a peace conference. Who knows what really happened on Fiery Gizzard? What we do know is that now the mountain will be around long enough for the stories to keep passing down. -- JR

MORE INFO: Accessed via Highway 41/56 in Tracy City, Tenn. Visit: secretfalls.com/hiking/215-fiery-gizzard-trail or friendsofscsra.org/parkmap.html

Pickett State Park

Mountain streams, natural sandstone bridges and large rock formations define Pickett State Park, located in the Upper Cumberland Mountains of Jamestown, Tennessee. The park was built on land donated by the Stearns Coal and Lumber Company in the 1930s, and construction by the Civilian Conservation Corps began immediately. Many of the original buildings, including cabins, a lodge and ranger station, were constructed out of sandstone and have earned the park recognition on the National Register of Historic Places.

Pickett State Park is a well-rounded place for family recreation and includes hiking trails, a 12-acre lake for boating and fishing, cabins, a lodge and ranger station. Unlike some Tennessee state parks, Pickett's remote location in the Cumberland Plateau attracts visitors who want to travel slightly off the beaten path. -- JR

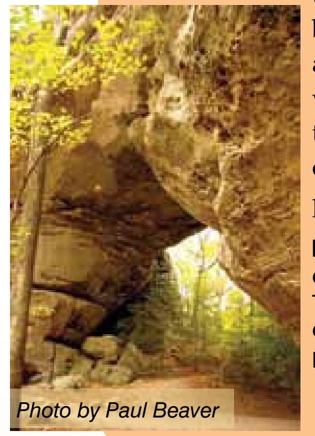


Photo by Paul Beaver

MORE INFO: Located in Jamestown, Tenn. Visit: tn.gov/environment/parks/Pickett

The Tennessee Wall

Known as one of the premier cliffs in Appalachia, the Tennessee Wall offers vigorous rock climbing with fantastic rock quality in the scenic Chattanooga mountains. A gem for the avid rock climber, the fine-grained orange and gray sandstone wall is nearly two miles long and is located deep in the confines of the Tennessee River Gorge. Most of the Tennessee Wall routes range from 5.7 to 5.11 in difficulty. Whether you are new to the sport or a climbing enthusiast, the T-Wall has something for everyone. Because the Tennessee Wall faces south, it gets very hot in the summer, so get there early and bring lots of chalk! The best time to plan a trip is September through June. Want to maximize a multi-day climbing fix? Primitive campsites are available in the woods nearby. -- MH

MORE INFO: Located 15 minutes from Chattanooga on Hw. 27 North. Visit: outdoorchattanooga.com/180.html

Photo by Justin Eiseman

North Carolina

Photo by Jared Kay

Cataloochee Valley

Surrounded by 6,000-foot peaks in the heart of the Great Smoky Mountains National Park, Cataloochee Valley is one of the loveliest early settlements in Western North Carolina. While the 19th century churches, homes and school are a charming site, there's an even bigger secret — the several herds of elk released to the valley in 2001.

Elk were once abundant in the southern Appalachian Mountains, but due to over-hunting and loss of habitat, they slowly disappeared.

The experimental release of elk in the Great Smoky Mountains National Park began with the introduction of 52 elk between 2001 and 2002. Now there are more than 140 elk roaming throughout the park. Cataloochee Valley is one of the best places to view these graceful animals because of its remoteness and open grassy fields. -- MH

MORE INFO: Located near I-40 about 20 minutes north of Waynesville, N.C. on Cove Creek Rd. Visit: www.nps.gov/grsm

Tsali Recreation Area

Challenging. That might be the best word to describe the nearly 40 miles of bike trails located in the Tsali Recreation Area just northwest of Robbinsville, N.C., in the Nantahala National Forest.

Photo by Leslie Kehmeier

"Tsali" is the name of a Cherokee Indian that sacrificed his life so that his people could stay in the serene Great Smoky Mountains during the Trail of Tears.

In 1838, the U.S. government ordered all of the Cherokees in North Carolina to move west to Oklahoma. However, Tsali and his people managed to stay and hide in the mountains. When they were found, an agreement was made to let the people stay if sacrifices were made. Tsali and several of his family members courageously sacrificed themselves and were buried under what is now known as Fontana Lake in the middle of Tsali Recreation Area.

A four-loop trail system with many other interlocking trails comprises this little piece of mountain biker's heaven.

But this recreation area doesn't only cater to avid bikers. Tsali's trails are open to hikers and horseback riders as well. Because mountain bikers and horseback riders are the primary trail users, trails are alternated to keep the two separated.

The four main trails — Right Loop, Left Loop, Mouse Branch Loop and Thompson Loop — wind along Fontana Lake at the base of the Great Smoky Mountains. The trails are hard-packed with a fast-paced flowing feel. Take a break from the vigorous ride through the trails to stop at one of the three designated overlooks featuring views of the lake.

Forest management has worked to ensure that wildlife remains at Tsali. In the grassy openings along Fontana Lake and in the pine and hardwood forests, trail riders might see wild turkeys, white-tailed deer, ruffed grouse, rabbits, songbirds and butterflies.

After a long, hard day of biking or horseback riding, fall back into your cozy tent anywhere on the National Forest lands. If you prefer the comfort of an RV, Tsali's public campgrounds, located directly next to the trail-head, are equipped with 41 graveled level sites, hot showers, flushable toilets and drinking water.

Day passes for mountain bikers are a mere $2, and official campsites are $15 a night. The perk? Wake up in the morning feeling fresh from a great night's sleep deep in the Nantahala, hop on your bike and do it all over again! -- MH

MORE INFO: 30 minutes southwest of Cherokee, N.C. on Hwy 28. Look for Tsali Campground Rd. after reaching Lake Fontana. Visit www.fs.usda.gov

Hidden TREASURES of Appalachia

Photo by Tony Smith Photography

South Carolina

Cherokee Foothills National Scenic Highway

One way to start your exploration of the little-known mountains in South Carolina is by driving along S.C. Highway 11, also known as the Cherokee Foothills National Scenic Highway. Curving through what is called Upstate South Carolina, the highway winds along the southernmost edge of the Blue Ridge Mountains past an interesting blend of Civil War history, scenic vistas and quaint mountain towns. The 112-mile byway — listed by motorcycleroads.com as "[one] of the best motorcycle roads east of the Mississippi" — follows what was once a trade route used by the Cherokee Indians and European fur traders. The route provides proximity to six state parks, dozens of waterfalls, three Civil War battlefields, and some excellent whitewater boating opportunities. Notable spots include Caesar's Head State Park and Table Rock State Park. -- *JG*

MORE INFO: Northern terminus starts off I-85 in Gaffney, S.C. Visit: scenic11.com

Photo by Raymond Truelove

Georgia

Fort Mountain

Driving up from the flatlands toward the southern end of the Appalachian Mountain chain in the northwestern corner of Georgia, you can catch occasional glimpses of this imposing mountain looming like a solitary guard in the distance. Up close, it's even more majestic. Named Fort Mountain because of a mysterious, 800-foot-long fortified wall thought to have been built by early Native Americans, the peak also lies within the rugged and beautiful Chattahoochee National Forest. A tidy state park on the southern side of the mountain provides a range of facilities from backcountry camping to cabins with A/C, and offers hiking, mountain biking and horseback riding trails and a 17-acre lake. The quaint town of Chatsworth lies just to the west of the mountain, and the nearby 750,000-acre Chattahoochee forest and 29,000-acre Cohutta Wilderness — straddling the Georgia / Tennessee line — means you'll have plenty to do for a while. -- JG

MORE INFO: Located 8 miles east of Chatsworth via Ga. Hwy. 52. Visit: gastateparks.org

Pennsylvania

Black Moshannon

Photo by Nicholas A. Tonelli

The most unique aspect of the 3,400-acre Black Moshannon State Park in central Pennsylvania — a project of the Civilian Conservation Corps of the 1930s — is the 1,992 acres of protected bog lands that form a rare biosphere home to three species of carnivorous plants, 17 varieties of orchids, and other plant and animal species normally found farther north. At 1,919 feet, the park sits atop the Allegheny Plateau and just west of the Allegheny Front, a steep escarpment that rises 1,300 feet in four miles. More than 20 miles of trails and a network of unpaved state forest roads adjacent to the park provide ample opportunity for hiking, mountain biking and cross country skiing. As part of the state's Important Bird Area #33, Black Moshannon is considered a top birding destination in the state; bird watchers have recorded 175 different species, including the Greater and Lesser Yellowlegs, the Alder Flycatcher and the Common Yellowthroat. While not as "hidden" as some of our other treasures (Black Moshannon Park is on "The 20 Must-See Pennsylvania State Parks" list), the sheer diversity of unique plants and birds makes it an intriguing prospect for any naturalist at heart. -- JG

MORE INFO: Located nine miles east of Philipsburg on PA 504. Visit: dcnr.state.pa.us

Cantwell Cliffs

Ohio

Photo by Ohio Department of Natural Resources

Among the natural wonders of Southeast Ohio is a set of reddish-brown sandstone formations known as Cantwell Cliffs. The cliffs are situated atop a bed of Blackhand Sandstone (southeast Ohio is the only place in the world where this type of sandstone exists). Characterized by a 150-foot-tall horseshoe-shaped formation overlooking a beautiful gorge, the cliffs feature narrow passageways and towering rock walls. No guardrails are in place, so keep an eye on young children. Cantwell Cliffs are the northernmost location in the alluring Hocking Hills State Park system, making them a less-visited spot and one of Ohio's most hidden public treasures. -- JR

MORE INFO: Located off of S.R. 374, near Rockbridge, Ohio. Visit: thehockinghills.org

Last Stand for the Southern Spruce Fir?

Continued from page 12

prognosis is better for spruce in Central Appalachia because the trees have access to northward migration corridors.

Conservationists with the Central Appalachian Spruce Restoration Initiative, a partnership between public and private organizations, are trying to restore the vitality and connectedness of these crucial forests, says Dave Saville, program coordinator for the West Virginia Highland Conservancy's spruce efforts. Red spruce once covered 500,000 acres of West Virginia, but logging, surface mining and development have reduced the forest to just 10 percent of its former range. Focusing on spruce habitat preserves the refrigerator-like microclimate that so many species depend on and protects spruce forest soils, which sequester a staggering amount of carbon that is released into the atmosphere when the soil is disturbed.

Keeping Tabs on Climate

It's not just conifers that depend on cool mountain environments. Back in North Carolina, Grandfather Mountain is home to several heath balds that support federally threatened wildflowers such as Heller's blazing star and Blue Ridge goldenrod. The mountain's sheer cliffs are one of just 11 sites in the world that support an ancient endangered plant called spreading avens, a nondescript member of the rose family that lights up with yellow blossoms in mid-summer. Pope observes the plant's colonies on Grandfather attentively, but in five years he has not seen any new sprouts on the mountain.

In addition to species monitoring, Pope contributes to an international climate database through an Appalachian State University program. Special equipment, provided by a NASA grant, enables Pope, and park visitors, to measure data such as incoming solar radiation, density of particulate matter in the atmosphere, temperature and precipitation.

Making measurements and observations to generate strong baseline data is critical, says ASU's Dr. Neufeld. He cites ecologist R.H. Whittaker's work to delineate and document sections of forest in the Smokies in the 1950s. Whittaker's careful notes on the forest flora allow today's researchers to see how these parcels of forest have changed over the past half century.

Getting everyday people involved in climate monitoring is one way to gather this baseline data. Dr. Rico Gazal, a professor at West Virginia's Glenville State College and a master trainer with an international citizen science program, is tracking the budding dates of yellow poplar trees in West Virginia with the assistance of his students and local volunteers. Gazal has also trained over 100 teachers to engage their classrooms in the project. He notes that because this type of research doesn't require any special equipment, it is easier to involve the public.

Gazal's study is inspired by collaboration with scientists in Japan who have 60 years of data detailing when the leaves of Japanese ginkgo trees bud and fall. Seven years into his yellow poplar project, Gazal's findings are consistent with those of the USDA — the growing season is getting longer. This extended growing cycle, he says, affects factors like the amount of water forests need and the timing of soil nutrient cycles that rely on leaf fall. Naturally, as the growing season lengthens for yellow poplar, it also lengthens for invasive plants and pests such as multi-flora rose and the balsam wooly adelgid. Citizen observation and satellite imagery provide scientists with valuable data that helps forest managers prepare for greater climate change.

Planning for the Unknown

Integrating research from different forestry disciplines helps researchers understand how seemingly separate factors, such as invasive pests and air pollution, can interact. Between 1998 and 2000, a severe drought led to a spate of spruce deaths in the high elevations around North Carolina's Mt. Mitchell. Dr. McNulty led a crew to investigate.

The group discovered that southern pine beetles, which usually live at lower elevations, were killing some of the spruce. The trees in trouble were some of the largest, healthiest-looking specimens. Research revealed that acid rain was depositing high levels of nitrogen in the soil. Nitrogen acts as a fertilizer, allowing plants to grow more vigorously aboveground while expending less energy developing deep roots. When drought struck, the trees with more needles and shallower roots struggled more than the scraggly trees and couldn't produce a healthy amount of resin due to lack of water. The same drought also made the spruce-fir environment hot and dry enough for the southern pine beetle to make its way to the mountains and attack the spruce. Because the scraggly trees with poorer soils had deeper roots and were more resilient to drought, they were able to repel the beetle with resin. The healthier-looking trees that weren't producing enough resin succumbed to the combination of drought and insect attack.

To McNulty, scenarios like this are the most troubling to climate scientists because they combine multiple factors in unexpected ways, making it difficult to plan. As he explains, there are some "knowns" that forest managers can plan for. "If it gets hot and dry we know there are going to be more wildfires so we can sort of plan for that. There are species we can plant that are better adapted to wildfires," he says. "Then there are unknowns that we may not understand but at least we can ask the question. For example, would increased atmospheric CO_2 actually make plants grow faster?" There is research that points both ways, he explains.

"What we can't quite do yet and what we're working on are these 'unknown unknowns,' these surprises associated with climate change that might actually have the biggest impact because we're least prepared to handle them," McNulty says, citing the red spruce deaths on Mt. Mitchell as an example.

McNulty likens decisions by forest managers about whether to spend limited resources protecting threatened spruce and fir ecosystems to decisions that people make about their own health care. Medical bills are often highest at the end of someone's life, and spruce-fir ecosystems have been shrinking since the last ice age. Climate change will hasten the pace of warming, he says, but "eventually, with or without climate change, these ecosystems will likely disappear in the Southern Appalachians."

Neufeld agrees that some changes are inevitable. "I think people just have to get used to the idea that [natural] communities are dynamic," he says. "There won't be bare slopes with nothing on them. Something will come in and colonize them."

Heller's blazing star is one of the endangered wildflowers found in high-elevation heath balds. Scientists speculate that these ecosystems depend on occasional fires to keep invading plants at bay. Photo courtesy of Grandfather Mountain Stewardship Foundation

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Guardians of our Public Lands

The employees of our state parks, national agencies and conservation organizations are committed to preserving the land we all own and enjoy. The future of our forests, air and water is in their care, and their work to protect our public lands deserves recognition and respect.

Larry Trivette
Superintendent, Elk Knob State Park, N.C.

Taking Community to the Summit

By Jesse Wood

"He's tough as nails."

That's how one colleague describes Larry Trivette, the superintendent of North Carolina's Elk Knob State Park.

"He'll work longer than anybody, than any of the volunteers and trail builders," says Eric Heigl of the Blue Ridge Conservancy. "He's just a leader in that regard. He's always out front."

For the past 32 years, Trivette has worked in the North Carolina state park system, and for more than 20 of those years, he was stationed at Stone Mountain and Morrow Mountain state parks. In 2004 – shortly after its creation to protect the headwaters of the North Fork of the New River – he became the first long-term superintendent of Elk Knob State Park in Watauga County, N.C.

An avid backpacker, hunter and fly-fisherman, Trivette grew up just down the road from Elk Knob in the community of Todd, fostering a love for the outdoors and its preservation throughout his childhood.

"I think that passion comes from growing up in a rural area and having the freedom as a child. When I was small, we didn't worry about kids disappearing, so my sister and I would venture off into the woods and be gone all day long," Trivette says. "I just developed a great love for the creation that has been put here for us and wanted to be a part of seeing that preservation carried on."

As superintendent of the park, Trivette has been instrumental in educating nearby landowners about conservation options, establishing the Elk Knob Community Headwaters Day as an annual day of celebration for locals. Heigl, who continues work with Trivette to expand the park, added that because of Trivette's leadership, Elk Knob State Park is a part of the community.

Trivette notes that one of the highlights of his job has been the interaction with the community and working with locals to establish and preserve Elk Knob for future generations. And with urban sprawl sweeping into communities surrounding Boone and Appalachian State University, Trivette is delighted to find landowners who will sell their land to a conservancy rather than to a developer.

"That's really been rewarding to me, to see that there are still those kinds of people out there, who could get more money possibly from developers, but have chosen not to," Trivette says.

A 20-minute drive from downtown Boone, Elk Knob State Park consists of more than 3,400 acres and boasts the second-highest peak in the county, which rises to 5,520 feet. The park is currently in an interim developmental stage, but Trivette plans to open backcountry campsites this summer, and a wheelchair-accessible trail is in the works.

During the winter, the park is open for backcountry skiing and snowshoeing. Currently, Elk Knob State Park has one trail – a 1.9-mile trek to the summit of Elk Knob, where Trivette has stood many times, gazing into the distance. Working alongside his volunteers, Trivette actually led the effort to build the summit trail, which opened last year.

"How can you work in a place like this and walk atop Elk Knob and look off into the valleys and far-reaching mountains and not just feel so super small," Trivette says. "It's really something to be able to say you are a part of saving this little chunk of land and preserving it."

Blazing Trails Toward Conservation

By Jenni Frankenburg Veal

Lifelong conservationist and Signal Mountain resident Sam Powell has helped preserve the scenic landscape of Chattanooga through his dedicated efforts to protect land and build trails for future generations. His work has made him a local hero — the road near several community schools is named after him.

Powell is one of the founding fathers of the Cumberland Trail, a scenic hiking trail that follows the eastern escarpment of the Cumberland Plateau in Tennessee. He helped found the Tennessee Trails Association in 1968 to coordinate the development of a statewide system of hiking trails, including the Cumberland Trail, and he was a strong supporter for the passage of Tennessee's Trails System Act in 1971. Powell is currently chair of the Signal Mountain Parks Board.

For decades, Powell has tirelessly developed trails on the Signal Mountain section (southern end) of the Cumberland Trail in partnership with the Boy Scouts, Tennessee Division of Forestry and many other volunteers. He is celebrated for his role in constructing a number of sturdy bridges that cross streams along the trail. Powell also developed the trails at Shackleford Ridge Park on Signal Mountain, which connect the Cumberland Trail with trails along Walden's Ridge.

Sam Powell
Lifelong Conservationist
Signal Mountain, Tenn.

Powell's impressive conservation resume includes helping to found the Tennessee River Gorge Trust — receiving the 1996 Adele Hampton Lifetime Achievement Award for his work with the trust — and serving on the Tennessee Conservation Commission. In 2002, Powell received the Robert Sparks Walker Lifetime Achievement Award from the Tennessee Department of Environment and Conservation.

"I hope to continue to encourage citizens to become more active in protecting our environment and to help them understand the consequences if we don't," says Powell, who still works with students at Signal Mountain Middle/High School maintaining and developing the trails that surround the school. "I also look forward to continuing my work involving local parks and greenways. My hope is to see the Cumberland Trail State Park completed by the time Gov. Bill Haslam leaves office."

Stephanie Connolly
Soil Scientist
Monongahela National Forest, W.Va.

A Scientist Who Really Digs Dirt

By Jamie Goodman

Stephanie Connolly's passion for dirt began at a very early age. At three, she was working her own garden. By six, she was driving a tractor. A steadfast dream of growing up to be a farmer stayed with her through high school. But when her grandfather, a farmer himself, told her that she was too smart to stay on a farm, she did what she considered the next best thing — pursuing degrees in agriculture and soil sciences.

Raised in Morgantown, W.Va., Connolly has traveled a serendipitous circle to end up as one of the U.S. Forest Service's top soil scientists working to protect the health of the country's forest ecosystems. After earning a Master's degree in soil chemistry from Colorado State University, Connolly started working for a large international corporation analyzing soil samples for projects including hydroelectric dams and gold mining. "I very quickly realized that was not the life for me," she says. "I realized I wanted to make a difference."

Following advice from her father to "work from the inside out," Connolly took the national registry exam for soil scientists — a certification akin to medical examinations for doctors. She scored so well — ranking number one in the nation — that the USDA's Natural Resources Conservation Service immediately offered her a position. As part of her work, she spent 18 months in the Great Smoky Mountains National Park mapping how variations in soil quality affected certain rare butterfly habitats.

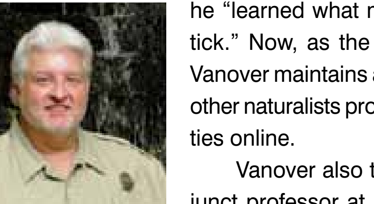
"North Carolina was really the turning point in my education," she says.

Today, Connolly works her dream job with the Forest Service, helping to "manage the soils that sustain the trees that sustain the forests." Key in her avocation is the study of how industrial emissions and climate change are affecting soil composition, which in turn affects the trees and ultimately the mammals and other species that depend on the forest. The goal, Connolly says, "[is to assess] which ecosystems will be most resilient through climate change, and do we see things in the soil that can help us determine what we should do — should we actively manage, should we passively manage, [or] should we protect."

"This is part of our mission," she says, "If we're going to be responsible and proactive about our response [to changes in climate], you have to stay on top of what is going on."

Kentucky's "Naturalist" Treasure

By Brian Sewell


Ron Vanover
State Naturalist
KY Dept. of Parks

Ron Vanover, a native Kentuckian reared in McCreary County, was raised with a passion for nature, and he's intent on passing it on to as many people as possible.

"I guess in some ways it became a family tradition," says Vanover, the state naturalist for the Kentucky Department of Parks, of his relationship to the 50 state parks he oversees.

In 1992, Vanover became the park naturalist at Jenny Wiley State Park in Prestonsburg, Ky., where he oversaw the creation of seven miles of trails and 121 campsites. But it was in 2005, after he became the park manager at Natural Bridge State Park, that he "learned what makes the parks tick." Now, as the state naturalist, Vanover maintains a blog and helps other naturalists promote park activities online.

Vanover also taught as an adjunct professor at Morehead State College for 10 years, and was recognized in 2009 as a "Teacher Who Made a Difference" by the University of Kentucky's College of Education.

As a naturalist, Vanover often describes himself as a "liaison between the resource and the visitor" — a quote from the "father" of nature interpretation, Freeman Tilder.

"I love the interaction and the knowledge I can pass along to a young naturalist coming out of school," says Vanover, whose students have since become everything from biologists to lawyers. "That's a good feeling to know, that you've been able to help someone."

A Country Kid's Passion for Preservation

By Bill Kovarik

Beth Obenshain
Founding Exec. Director
New River Land Trust

During the 1980s and 90s, Beth Obenshain watched as suburban developments swept away the farms around Blacksburg, Va., where she had grown up. And, as a self-described "country kid," it bothered her.

So in 2002 she retired as a senior editor for the *Roanoke Times* to serve as the founding executive director of the Blacksburg-based New River Land Trust, a non-profit conservation group that encourages landowners to preserve land using voluntary easements.

"It was about saving farms, and I grew up on a farm, and I saw so much change in my life," Obenshain says wistfully.

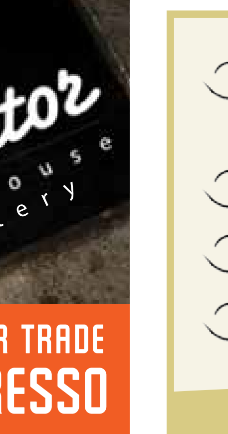
Now, after helping farmers and landowners place 40,000 acres of land across eight counties under easements, Obenshain looks back on almost a decade of guarding the public interest by preserving farms and historic sites.

"Conservation easements speak to Virginia's heritage," she says. "They are about saving the very fabric of this beautiful and historic state."

Among sites preserved under easement are: Ingles Tavern, where Davy Crockett once stayed; and the home of Tilly Wood, who was famous for her generosity to thru-hikers on The Appalachian Trail.

"I'm incredibly elated and proud that these properties are going to be there for future generations," she says. "[They] go back to the founding days of our country."

Although Obenshain recently retired, she continues to work on preservation, which she says has been rewarding, and an adventure, too. "I've gone down little back roads, places I had never been and never would have been, if not for the land trust."



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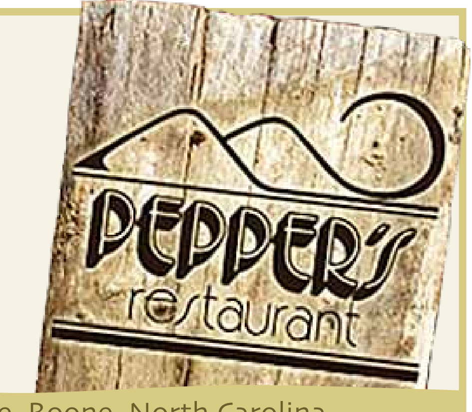

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Plundering Private Property Rights

Resource-Rich Landowners Face A Daunting Future

By Paige Campbell

Half a dozen generations ago, when a coal-mining boom first enticed southwest Virginians to sell the rights to minerals beneath their land, the deal they were making concerned the coal itself. At least, that's how Virginia's courts have defined mineral ownership through most of the state's mining history. But on April 9, that understanding shifted when Governor Bob McDonnell signed state House Bill 710 into law.

Mining companies are now legally entitled to not just the coal, but the empty void created by its removal. In practical terms, H.B. 710 allows companies to use mine voids as disposal sites for coal mining waste products. In fact, at least one mining company, CONSOL Energy, routinely used empty Buchanan County, Va., chambers for that purpose without landowners' consent until 2008, when the company was found guilty of trespassing and eventually paid $75 million in damages.

Following H.B. 710, if CONSOL or any other company wants to use a voided mine for waste storage, they need only to negotiate a price. The law says that landowners are entitled to financial compensation, but cannot refuse a coal company's contract outright. If the two parties fail to reach an agreement, a judge will determine fair settlement.

It's a monumental re-structuring of property rights, says Gerald Gray of Clintwood, Va., an attorney representing Buchanan County landowners who say the mine voids under their land were used as dumping grounds for mine wastewater without their consent. In the original mineral deeds, "there was never any contemplation that a coal company would retain substantial rights to the land after the coal was removed," Gray says. "The Supreme Court has made it quite clear in several past decisions that the surface owner owns the mine void."

Untreated coal processing wastewater, which contains toxins including mercury and arsenic, can present environmental concerns to aquifers and other drinking water sources, says Gray, who is also the president of the Virginia Conservation Network. His biggest concern, however, is the political might of the coal industry. "When the minerals were acquired by the coal companies, they could have bought the right to use the mine voids to deposit waste. But they didn't. This new law allows the industry to essentially condemn private property for its own purpose and financial gain." He believes that H.B. 710 violates the Virginia constitution.

State Senator Phillip Puckett, who represents Virginia's southwestern counties, initially opposed the bill. But ultimately, an amendment that called for routine financial negotiations between landowners and the coal companies swayed his vote. "The original bill had no provisions for that," says Puckett. For many landowners, filing suit independently would be far too costly.

"I don't like coal companies running rough-shod over people," says Puckett, "but I also know that these companies bring some of the best jobs we've got in Buchanan County." Puckett says he aims to navigate that balance in his district's best interest.

The view from Mary's Chapel, near the Washington County, Va. community of Benhams. The chapel and valley sit above deposits of shale that have attracted attention from a gas-drilling company. Photo by Paige Campbell

Such pragmatism, however, does little to ease the deep concerns of constituents like Ben Hooper of Appalachia, Va. A long-time advocate for the protection of southwest Virginia's mountains, Hooper sees a heavy corporate hand at play in H.B. 710's passage. "This law was passed, bought by coal, to stem off lawsuits," he says plainly. The coal industry, Hooper believes, fueled a legal shift unthinkable to other industries. "If I were to buy timber rights from a property owner," he wonders, "could I expect to own the void once the timber is removed?"

To Hooper, the law is a new chapter in a familiar raw deal for local people as they lose long-term economic power in exchange for small payouts. In his community, "rarely does anyone own their mineral rights," he says. "They were sold years ago, and now we feel we've lost even more."

Capturing Communities

As H.B. 710 cases begin to play out across Virginia, the legal nuances could inform another looming property-rights battle involving hydraulic fracturing for natural gas. The controversial techniques — which have been shown to cause groundwater contamination, among other issues — have forced lawmakers across the region to grapple with new regulatory legislation.

In Pennsylvania, existing gas regulations are rooted in a state Supreme Court decision that compared natural gas to, for lack of a more precise classification, a wild animal. An 1889 ruling declared that free-flowing natural gas, like an animal being pursued by

Continued on next page

Property Rights

Continued from previous page

a hunter, has "the power and the tendency to escape without the volition of the [land]owner." Therefore, according to the ruling, "possession of the land… is not necessarily possession of the gas."

The context for the court's analogy goes back even further, to the dead fox that prompted New York's landmark Pierson v. Post decision in 1805. Pierson, the man who shot the fox in question, was allowed to keep it, the state's highest court determined, overruling a lower court's finding in favor of Post, who'd been pursuing the fox well before Pierson laid eyes on it. That's the essence of the "Rule of Capture" — the first person to physically possess a wild animal (or a free-flowing supply of natural gas, as the case may be) gets to claim ownership of it, even if it originated on someone else's property, and even if that someone saw it first.

When applied to gas drilling, the Rule of Capture led to disorder and waste, says John K. Baillie of PennFuture, a citizen-led organization advocating for natural resource conservation. Landowners scrambled to extract their gas before their neighbors could. But so many small wells meant no one was collecting much, Baillie wrote in a 2011 academic paper titled "Pooling and Unitization in Pennsylvania," and the sudden abundance depressed prices. So in 1964, a new law introduced the concept of forced pooling, a process that maps out large plots, each comprised of many people's property, to supply individual wells. The goal was for landowners to be compensated for their share of the gas and benefit from the improved efficiency.

The gas extracted from Pennsylvania's Marcellus Shale, however, sits at a depth that is not covered by the 1964 law. It is also not free-flowing, and requires the use of horizontal, not vertical, wells. In Pennsylvania, those conditions have been understood to exclude fracking from the forced-pooling laws already on the books.

In other words, if Marcellus Shale gas is a wild animal, it's a different sort of beast than early Pennsylvania jurists could have envisioned. It's a beast that demands more invasive drilling techniques and thus demands its own legislation, which the industry is eager to introduce. One proposed bill would require the consent of 75 percent of landowners before pooling can begin; the rest could be compelled to negotiate for royalties and to allow the drilling to proceed against their objections.

In Virginia, where laws make no distinction between vertical and horizontal wells, the most industry-friendly forced-pooling laws in the nation allow gas companies to extract from a pool of properties with the consent of just 25 percent of landowners. Compensation to the rest — who often aren't even notified of the drilling — is periodically sent to a statewide escrow account.

But as Daniel Gilbert of the Bristol Herald Courier reported in 2009, many landowners who are force-pooled "receive no accounting of their royalties in escrow, and they face enormous legal barriers in collecting them." What's more, Gilbert found, is that state regulators have done little to ensure gas companies actually pay up. In each of the 18 months he studied between January 2008 and June 2009, at least 22 percent of landowners who were subjected to forced pooling failed to receive any royalties at all, even though their corresponding wells had produced gas. In some months, that number was over half.

The Right to Resist

Some Virginia municipalities with local bans on gas drilling are taking another look at the issue now that the southern reaches of the Marcellus Shale, with all its lucrative potential, has caught the industry's eye. Last year, the Washington County, Va., board of supervisors faced pressure to reverse its long-held prohibition against gas drilling when the Southeast Land and Mineral Company petitioned to establish new 160-acre forced drilling pools in the remote community of Benhams and begin extracting gas.

In Benhams, one-lane roads snake between hillside cow pastures, just-tilled gardens and thick patches of woods full of trilling cicadas. Karen Shaffer's roots in the community go back over a century, to her great-grandparents who came from Italy and Ireland to farm and hunt. Shaffer remembers Sundays of her childhood: picking up milk at Spahr's dairy for dinners at her grandparents', pitching horseshoes, looking for ginseng and visiting small family cemeteries across the valley.

"These sacred spaces would be endangered by gas drilling," says Shaffer. If drilling is allowed and just a quarter of her neighbors sign on, fracking chemicals could start fracturing the rock deep beneath her land without her consent. She fears contamination of the spring that supplies her water, air and noise pollution, and compromised safety for children at two nearby schools.

But for the short-term, Shaffer can breathe easy. Outcry from the Benhams community and members of the local chapter of Virginia Organizing, a statewide community organizing network, recently helped prevent the county's land-use committee from quietly changing the ordinance. Ultimately, the county's board of supervisors voted to permit no further action on the matter until a nationwide U.S. Environmental Protection Agency report on the safety of fracking is released in 2014. The prohibition on gas drilling will remain until then.

As the natural gas boom continues, states are facing regulatory challenges to protect private landowners. In Dimock, Pa. — a town transformed by hydraulic fracturing in the Marcellus Shale — a drilling rig looms over a nearby home. Photo by Aaron Nutter.

The take-away for Shaffer? "People have rights over drillers." And the key to claiming those rights, in her experience, depends on an organized effort to inform citizens of the legal process and the real stakes. "I am certain our collective voice raised awareness enough to stall drilling for now."

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Coal Generated Electricity Drops To All-Time Low in First Quarter

By Jessica Kennedy

Data released in early May show that coal's current share of U.S. electricity generation is at an all-time low.

According to the U.S. Energy Information Administration's Short-Term Energy Outlook report, coal made up only 36 percent of the country's electricity in the first quarter of 2012, a drop of more than eight percentage points from the previous all-time low of 44.6 percent in 2011.

The EIA expects electric power industry coal consumption to continue falling by an additional 14 percent in 2012, while natural gas is predicted to grow by over 20 percent. This switch is primarily driven by falling prices of natural gas, which dropped by 7.5 percent in 2011.

Coal production at mines is expected to fall by more than 10 percent this year, according to the EIA report. According to a February thinkprogress.org article, 106 coal plants have closed since 2010.

Data from the Mine Safety and Health Administration counters the coal industry's claims that regulations from the Environmental Protection Agency has eliminated coal jobs; Since the EPA's issuance of an interim guidance on Appalachian surface mine permitting in April 2010, the number of Appalachian miners has actually grown by 10 percent, despite a decline in demand for U.S. coal.

Coal Financing Under Scrutiny

By Molly Moore

Bank of America, JP Morgan Chase, Citi, Morgan Stanley and Wells Fargo ranked as the five worst banks for coal financing in an annual report issued by Rainforest Action Network, BankTrack and Sierra Club. Banks were rated according to their investment in mountaintop removal coal mining and coal-fired power plants.

The report comes as the coal industry's financiers face greater scrutiny regarding their investments in coal. Demonstrations against PNC Bank and Bank of America were held this May in Pittsburgh and Charlotte, and UBS Bank, which was not mentioned in the report, was the subject of demonstrations in multiple cities.

At the Bank of America shareholders meeting, Larry Gibson of the Keepers of the Mountains Foundation, whose home on Kayford Mountain in West Virginia is surrounded by mountaintop removal mining, asked the bank to stop funding the destruction near his home. According to the Rainforest Action Network report, Bank of America underwrote $4.3 billion in coal-related investments over a two-year period.

"Ultimately, the coal industry is a business," says Walter Hjelt Sullivan, program director for Earth Quaker Action Team, which is currently targeting PNC Bank. "Coal companies could not operate without banks. Not everyone lives in the coal fields, but we all use banks and that gives us power to act."

Credit Suisse was the only big bank to earn high marks in the report for its policy of not investing in mountaintop removal coal mining.

EPA to Appeal Spruce No. 1 Court Decision

The U.S. Environmental Protection Agency announced in May that it would appeal a court decision that overturned the agency's veto of the Spruce Mine No. 1 mountaintop removal permit in West Virginia.

The mine in question — Arch Coal's Spruce Mine No. 1 — would span 2,278 acres and be the largest mountaintop removal mine in state history. When the EPA vetoed an essential water pollution permit in Jan. 2011, citing the fact that the mine would bury seven miles of streams, it was was the 13th time since 1972 that the agency vetoed a permit already issued by the Army Corps of Engineers.

The judge who overturned the EPA veto said the agency had overstepped its role by vetoing a permit that was approved by the Army Corps.

EPA's Greenhouse Gas Inventory

By Brian Sewell

The U.S. Environmental Protection Agency has released a national inventory of greenhouse gas emissions for 2010. The Inventory of U.S. Greenhouse Gas Emissions and Sinks concludes that total emissions of the six main greenhouse gases, including carbon dioxide and methane, rose 3.2 percent from the previous year. Reaching the equivalent to 6,822 million metric tons of carbon dioxide, the inventory reports a more than 10 percent increase in total emissions since 1990, when the agency began collecting greenhouse gas emissions data to be presented in a comprehensive report.

The EPA says that charting the emissions and "sinks" — the amount of carbon taken up by forests, vegetation and soils — is an essential first step in identifying and addressing the threats associated with climate change.

The entire inventory is available at epa.gov/climatechange.

The COAL REPORT News from Appalachia and Beyond

OSM Threatens Takeover of Kentucky Surface Mining Regulation

By Molly Moore

Office of Surface Mining Director Joe Pizarchik made headlines in May when he sent a letter to Kentucky regulators warning that their failure to require appropriate reclamation bonds could lead to a federal takeover of all or part of Kentucky's surface mining enforcement program.

Surface mining law allows states to enforce the law under federal oversight. When it comes to reclamation bonds, that means that states must require coal companies to post a bond equivalent to the cost of reclaiming mine sites. If the company reclaims a site according to permit requirements, they get their money back. If not, the bond provides the state with funds to come in and clean up the site — if the bond amount was sufficient.

Pizarchik's letter follows several years of heightened federal oversight of Kentucky bonding practices. Kentucky agencies and OSM studied whether the state's bond amounts are high enough to cover the cost of reclamation if a coal company forfeits.

The resulting reports revealed chronically low bond requirements. A 2008 oversight study found that, among sites where bonds were forfeited, four out of five bond amounts were inadequate. Reports identified similar problems in 2009 and 2010. A 2011 study found that 18 of 22 forfeited bonds were too low to cover the cost of reclamation.

A separate state study looked at 39 forfeited bonds between January 2007 and May 2011 and found that 80 percent were inadequate.

In April and August of 2011, the Kentucky Department of Natural Resources proposed improvements to the bond system. OSM said both Kentucky proposals were a step forward, but didn't go far enough to fix the problem. Kentucky bond calculations haven't been adjusted since 1993.

With the letter, Pizarchik has set in motion a legal process known as Part 733, which allows the state to meet informally with OSM to discuss their differences. If talks fail to generate an agreement, OSM will hold a public hearing in Kentucky. If the problem is still unresolved, OSM can take over all or part of the state's surface mining enforcement program.

Coal River Makes America's Most Endangered Rivers List — Again

By Anna Norwood

Coal River in West Virginia has been named one of America's Most Endangered Rivers for 2012, ranking ninth on watchdog organization American Rivers' list of the top 10 threatened waterways in the country.

American Rivers cites mountaintop removal coal mining with contaminating Coal River.The report states that, "approximately 20 percent of the river's watershed is permitted for coal mining, and one-third of that area has already been mined. Over 100 miles of headwater streams have already been buried in the watershed." Coal River previously ranked sixth on the 2000 endangered rivers list.

A 5,000 acre project has been proposed to level Coal River Mountain, the last remaining mountain untouched by mountaintop removal in the Coal River Valley. According to American Rivers, "Congress must restore Clean Water Act protections to the Coal's headwater streams in order to prevent more destructive mining and permanently safeguard clean water and public health."

Two other rivers in Appalachia appeared on the 2012 list. The Chattahoochee River, which runs through Georgia, ranked third, and is threatened by proposals for new dams and reservoirs. The Grand River in Ohio, number six on the list, is listed as being at risk from natural gas development.

In Brief

Citizens Divided

Coal industry lawyers seek to restrict the amount of input — including evidence from academic and scientific experts — allowed by citizen groups in cases regarding mountaintop removal coal mining permits. The argument made to U.S. District Judge Robert C. Chambers, by attorneys representing Alpha Natural Resources, came as the court considers at least two challenges levied by citizen groups against previously approved surface mine permits. In addition to citizen groups, the U.S. Environmental Protection Agency has also raised concerns over recent permit impacts on water quality, including the 635-acre Reylas Surface Mine in West Virginia, which would bury 2.5 miles of streams.

Listening to the Public

During May of this year, the EPA held three public hearings to gather information from the public and stakeholders regarding 36 drafted National Pollutant Discharge Elimination System permits for Kentucky coal mining operations. The hearings were a response to the EPA's specific objections of the permits out of concern that they do not adequately protect water quality, the environment and human health consistent with the Clean Water Act.

FirstEnergy Water Lawsuit

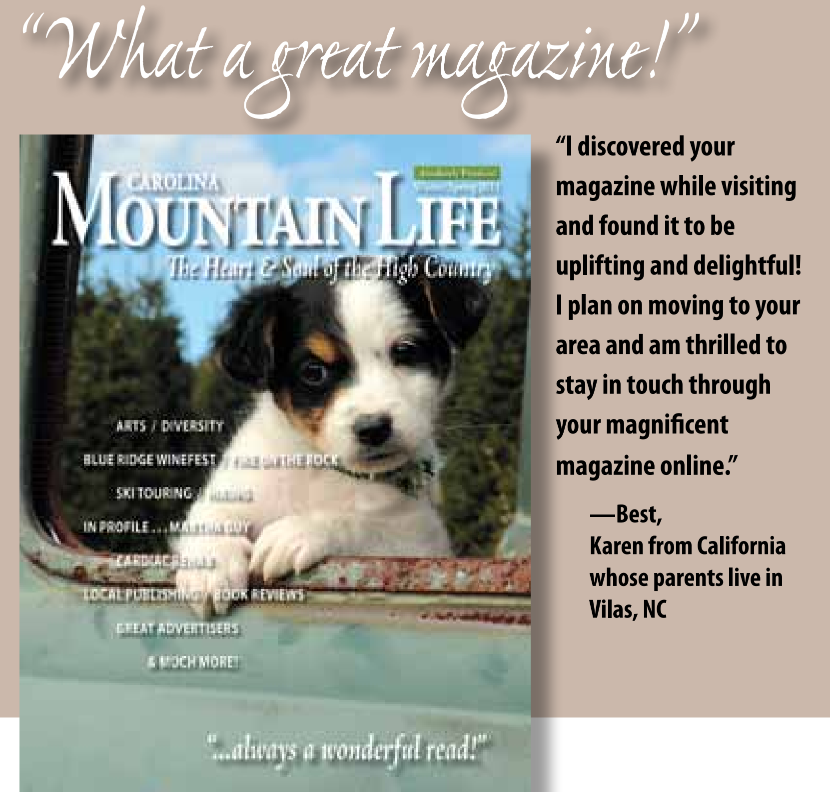
The Akron, Ohio-based FirstEnergy Corp. has settled with environmental groups in a lawsuit against the electric utility for alleged arsenic pollution from a coal ash pond at its Preston County, W.Va., Albright power plant. The environmental groups, including the Sierra Club and West Virginia Highlands Conservancy, claimed that FirstEnergy was liable for fines of up to $9.4 million for federal violations under the Clean Water Act. The case was settled for $50,000 and the Albright plant is scheduled to shut down in September. FirstEnergy denies any wrongdoing.

Duke CEO Questioned

At Duke Energy's annual shareholders meeting in North Carolina, some attendees questioned CEO Jim Rogers about the company's use of mountaintop removal coal and storage of coal ash. When a mother, who was diagnosed with cancer and lives near Duke Energy's Riverbend plant, and her child expressed their concerns over coal ash, he responded, "I believe that lake is safe, I believe the air is safe and I believe you'll be fine." Later on, Rogers agreed to have a "long conversation" with environmentalists.

Virginia Loves Coal

The Governor of Virginia signed into law two bills in a strong show of support for the coal industry. The first bill promotes tax credits for coal jobs in the state, while the second bill was designed to increase mining safety through increased mapping in areas where coal and natural gas operations are working in close proximity. The bills signed by Gov. McDonnell will take effect July 1 of this year.



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Editorial

Saving Our Natural Heritage

The American spirit is tied to the land, to "purple mountain majesties" and the pioneer's self-reliance. Our relationship with the natural world has always been a balancing act between the drives of conquest and extraction and an instinctual dependence, curiosity and respect.

When we fail to guard our public lands against those who would tilt that balance into the deep pockets of a greedy few, we are selling out the American spirit. Supporters of big industry try to decry the very presence of public land, implying that the word "public" violates our freedom. That couldn't be further from the truth — the public is us, and this is our land.

The American Legislative Exchange Council — the ultra-conservative lobby group that championed mandatory IDs for voters and launched preemptive attacks on regulation of coal ash — has set its sights on reducing protections for public lands. ALEC is behind proposals that would benefit extractive industry by transferring ownership of federal wilderness areas to states, undermine the president's ability under the century-old Antiquities Act to establish national monuments, and roll back the Endangered Species Act.

A slew of bills would impose costly penalties for groups or individuals that challenge leasing and drilling decisions on public lands. Extractive industries claim their access to public land is unfairly restricted, even though they have more public land than they need — over 20 million acres of federal land leased by these industries are unused.

Legislation was also introduced this spring, ironically called the Sportsman's Heritage Act, that claims to open wilderness for hunters and anglers, but would actually lead to the intrusion of more roads and logging in wild areas that are already open to hunting. Opponents to the bill see it as a petty attempt to divide hunters and conservationists and prevent them from standing up for their shared resources.

Yet if there's one thing Americans agree on, it's the protection of our public lands, even if some of our elected officials don't understand the land's value.

Undeveloped public lands help to clean our air and water, and provide economic boons to municipalities across the country via recreation and tourism. Americans have a public covenant to protect our remaining wild places for future generations. Championing the short-term wishes of corporate power brokers over long-term needs to protect our health and local communities means that profit wins out over humanity.

It's up to us to determine whether this is the moment in history where our natural heritage is sold to the highest bidder or where the voices of the people unite to protect our public lands.

Viewpoint

Translating Intentions Around Climate Change into Religious Action

By Mallory McDuff

As climate change becomes more politicized in Congress, many religious leaders — from evangelicals to Episcopalians — have expressed more agreement than discord on the need to address the rising threat. Yet it's often easier to acknowledge the urgency of the climate crisis than to translate that knowledge into action on a congregational level.

As a lifelong Episcopalian, I traveled across the country with my two children to document how churches were integrating the environment into their ministries. This research revealed a need for stories and strategies about how congregations were confronting climate change, the greatest moral crisis of our time.

To that end, the anthology *Sacred Acts* includes voices from local congregations that are harvesting food from church gardens, weatherizing parish halls, installing solar panels on sanctuaries and advocating against mountaintop removal.

Faith-based environmental organizations such as Earth Ministry, Interfaith Power & Light, GreenFaith and the Evangelical Environmental Network are working with faith communities to address climate change through stewardship, spirituality, advocacy and justice. Georgia Interfaith Power & Light, for example, has completed 76 energy audits of religious facilities, saving congregations 20 percent of their energy budgets; 200 more congregations are in the pipeline.

Many of these stories have ties to Appalachia. In Kentucky, Father John S. Rausch describes the decades-long effort to combat mountaintop removal through advocacy and liturgy, such as using the Stations of the Cross to highlight the horrific impacts of mountaintop removal on Appalachian communities.

Food, faith and climate are connected through the church garden at Oakley United Methodist Church in Asheville, N.C. Newcomers to the church receive a jar of salsa, canned with garden tomatoes; elders have hosted canning parties for young families, and the church parking lot is the site of a farmers market.

At La Capilla de Santa Maria, a church that ministers to Spanish-speaking immigrants in Western North Carolina, Jill Rios worked with parishioners on sustainable building projects for the church.

Despite this momentum, some skeptics might protest that churches are unprepared to confront global warming when memberships and budgets are shrinking. Others might say people of faith lack the capacity to act with consensus around a politically divisive issue.

But history tells me that Christians have mobilized around moral and political issues such as the anti-slavery and civil rights movement. Climate change has brought together diverse religious denominations that often disagree about issues such as abortion or gay marriage, especially in North Carolina.

We must reinvigorate churches through climate action that reflects loving our neighbor as ourselves. Our faith prepares us for sacred acts of resistance that can reconcile us with the earth, each other, and ultimately with God.

Mallory McDuff, Ph.D., is the author of Sacred Acts: How Churches are Working to Protect Earth's Climate *(New Society Publishers, 2012) and* Natural Saints *(OUP, 2010). She teaches at Warren Wilson College.*

Revealing the Common Thread: Blue Ridge Commons

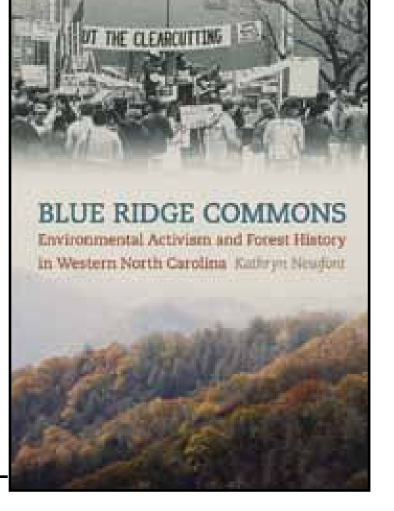
By Brian Sewell

Appalachian Voices Book Club

Last year, Western North Carolina recognized the 100-year anniversary of the Weeks Act, the law that gave the U.S. Forest Service the ability to purchase private land in the Eastern United States to be managed as National Forests. Historian Kathryn Newfont's new book, *Blue Ridge Commons: Environmental Activism and Forest History in North Carolina*, caps that centennial celebration by tracing the evolution of the Forest Service since the passage of the Weeks Act and exploring the history of Pisgah and Nantahala national forests, two of the earliest eastern woodlands managed by the agency.

Astounding in its breadth of research, *Blue Ridge Commons* encapsulates the past century from the early days of the Forest Service's eastern expansion to the rise of clearcutting and the emergence of the environmental movement. Exploring the notion of commons environmentalism — resources held by all and shared among a community — Newfont traces the region's irrevocable relationship to the resources found in the forest — no matter its managers.

Recently, we spoke with the author and historian about Blue Ridge Commons and how Appalachian communities and those around the world are still standing up for the commons (see below for interview).



Author's Corner Q&A with Kathryn Newfont

Q: What is the distinction between commons environmentalism and wilderness environmentalism?

A: The commons relationship with the forest, or it could be with another set of resources -- fisheries being a great example -- is a harvest relationship. Wilderness is seen as ahistorical. There is this sense that people are not part of wilderness, which suggests there is not really a human history in wilderness. That's only one definition of wilderness, but it's one that, until recently, wilderness environmentalism was really built on.

[Wilderness environmentalism] is not going to resonate with people who have close working relationships to a landscape. For them, the woods are richly historical. Hunters typically learn to hunt when they're very small. They go out with [their] fathers and uncles and cousins and so on. They go to places that their ancestors have gone to for a century or more. They're inheriting this sense of history, which is very different from wilderness.

Q: How did the regional notion of the commons change when the early national forests were established?

A: The coming of the national forest, in a lot of ways, enabled the persistence of the commons. In other parts of Appalachia, people treated coal company land as de facto commons. But when coal companies come in with bulldozers and plow down the commons, there's not much people can do about it. They can't defend the commons very effectively from corporate owners.

Most of the Pisgah and Nantahala national forests in North Carolina were purchased from timber companies. They had already moved out of the hands of local owners. When the lands moved into government ownership, they were under the rubric of the Forest Service, which had a harvest approach to forest resources as opposed to the Park Service.That harvest model dovetailed really nicely with the harvest tradition of commons use.

The thing that's different is when you get to the post-World War II era with large-scale industrial development happening. That's when you start getting big harvest equipment in the coal mines and in the timber arena. When the Forest Service starts coming in and clear-cutting or leasing to oil and gas companies for petroleum development, well at that point local people can actually exert their power as citizens, protecting lands that they ultimately own.

Q: Can we see the commons at work today?

A: In this region, just think of opening day of hunting season or fishing season. Right now, if you walk up to your local produce stand, you'll find ramps. If you go to a store that deals in medicinal plants, those are coming off the commons. A lot of times those are harvested from national forest land or land serving as de facto commons. Being aware of it helps to explain the cultural perspective that a lot of mountain residents are coming from.

Across the globe, the easiest ones to point to are all the fisheries, from the Gulf here in North America to waters off the coast of Japan. There are commons systems in lots of forests too: parts of the Amazon, and the forests of Southeast Asia. Those systems are alive in a lot of places.

My hope is that once people can understand what commons is, they'll be able to see it in more places. If we just begin to understand that these systems exist in a lot of places, they have a lot of staying power.

Q: Can the idea of the commons be used to exert pressure on corporations?

A: I'd like to think so. I think taking on the big corporate development is much more challenging than taking on the government. At some level government is supposed to be answerable to the people. Corporations don't always recognize that same responsibility. But the notion of commons includes some attention to livelihood, to actually make some kind of living. I do think it has power in that direction.

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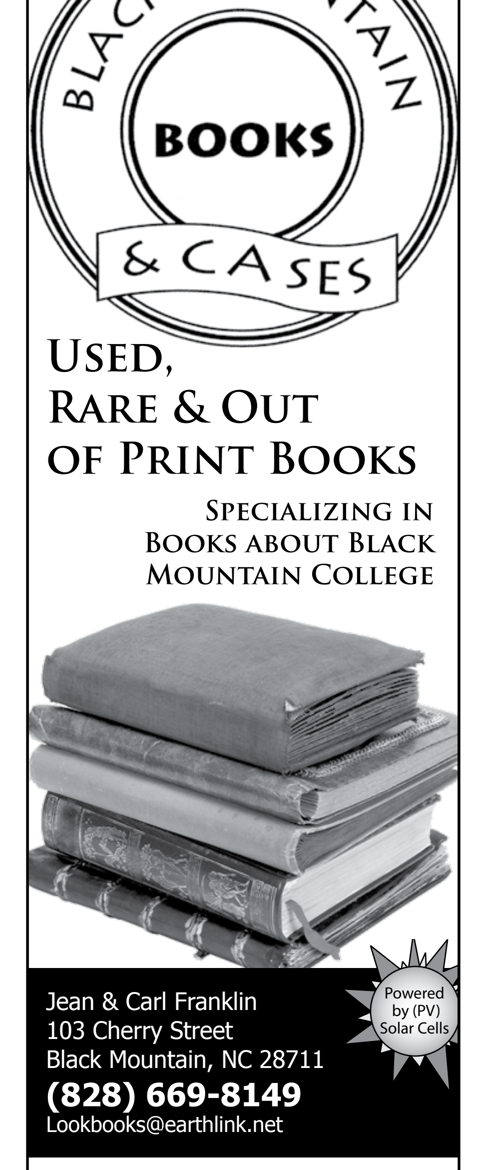

Join Our 15th Anniversary Celebration

Just a few short weeks from our press date, Appalachian Voices will be celebrating its 15th anniversary of working to protect the air, land, water and communities of Appalachia. We hope you're able to join us at the "Artists for Appalachia" event on June 21 in Charlottesville, Va., where we will enjoy a special evening of music, readings and revelry with distinguished guests including Jeff Goodell, Kathy Mattea, Daniel Martin Moore, Michael Johnathon, and more!

Founded in 1997 in Boone, N.C., Appalachian Voices now has offices in Charlottesville, Va., Nashville, Tenn., and Washington, D.C. We use grassroots organizing, education, citizen activism, high-tech online tools, litigation and legislation to empower everyday citizens to speak up for the mountains and help shape policy on a range of issues including mountaintop removal coal mining and air and water pollution from coal-fired power plants.

For information on reserving tickets, please visit Appvoices.org/ArtistsforAppalachia. If you're not able to attend but would like to join the effort to preserve Appalachia's natural and cultural heritage, please visit appvoices.org/membership to find out how you can get involved.

Appalachian Water Watch: Bringing Polluters to Justice, One Lawsuit at a Time

Appalachian Voices has joined the Sierra Club and Southern Appalachian Mountain Stewards in filing suit against A & G Coal Corporation in Virginia. The suit, represented by the environmental law firm Appalachian Mountain Advocates, alleges that A & G has been polluting Virginia's public waterways through unpermitted discharge of selenium. The unpermitted discharge violates both the Clean Water Act and the Surface Mining Control and Reclamation Act.

Selenium is a naturally occurring element in some rock layers in Central Appalachia. Left in the ground, its toxic properties do not cause harm. However, surface mining can release this element into streams, where it accumulates in fish and other aquatic life, causing deformities and reproductive failure.

Frasure Creek Update

In April, the Supreme Court of Kentucky ruled in favor of Appalachian Voices and our partners Kentuckians for the Commonwealth, Waterkeeper Alliance and the Kentucky Riverkeeper. The ruling upheld a lower court decision that allows us to intervene in a settlement between Frasure Creek Mining and the Kentucky Energy and Environment Cabinet.

The original lawsuit brought against Frasure Creek Mining and International Coal Group in 2010 was for 20,000 violations of the Clean Water Act with potential penalties of over $700 million. Violations listed in the suit included false and potentially fraudulent reporting of water pollution levels. The coal companies reached a settlement agreement with the Kentucky Energy and Environment Cabinet of $670,000, less than one percent of the allowable fines, and Appalachian Voices and partners decided to intervene.

The Supreme Court decision stands as confirmation of citizens' rights to take part in the enforcing of the Clean Water Act. Despite this provision in the federal law, the Kentucky cabinet opposed Appalachian Voices' intervention and joined Frasure Creek in appealing the Circuit Court decision that allowed us to intervene.

The case is currently in court-ordered mediation, and settlement talks are ongoing.

For more information about our Appalachian Water Watch work, visit appvoices.org/waterwatch.

Organizational Roundup

Coal Ash Debate Spills Into Transportation Bill

Appalachian Voices' Red, White and Water campaign is working to oppose an amendment on the federal Transportation Bill that would essentially halt the U.S. Environmental Protection Agency's rulemaking process on toxic coal ash storage and disposal. The bill passed the House in April, and is now undergoing review by a House and Senate Committee.

The provision was introduced by Rep. David McKinley from West Virginia and is identical to another bill he introduced which was passed by the House last fall. McKinley's district is home to the Little Blue Run coal ash pond, the largest in the country, spanning two states and covering approximately 1000 acres. Residents of neighboring Chester, W. Va., have complained of gushing leaks from the side of the pond.

Seventy-nine House members, including several Appalachian lawmakers, signed onto a letter to committee co-chair Senator Barbara Boxer, asking that McKinley's provision be kept in the final version of the bill.

A Prize Possum

Thanks to the big hearts of some North Carolina musicians, Appalachian Voices is making new friends in the gently rolling hills of the Piedmont. Molly McGinn, the sultry-voiced singer from the Greensboro, N.C., collaborative country-alt band Wurlitzer Prize, and David Brewer, the massively talented musician often fronting Americana rock and roll favorites Possum Jenkins, hosted a fantastic evening of music with their bands as a benefit for Appalachian Voices. At the end of the show, the musicians donated a hefty portion of the proceeds to our work to end mountaintop removal coal mining. A hearty thank you to both of these amazing groups — please be sure to check them out! Visit: possumjenkinsband.com and wurlitzerprize.wordpress.com

Reaching the World, One Google Earth Layer At a Time

Appalachian Voices was recently featured by Google Earth Outreach in a case study detailing the organization's use of advanced Google mapping tools to make a difference for the planet. The case study focused on the Appalachian Google Earth layer that provides a high-resolution tour of a mountaintop removal mine site, before-and-after overlays for hundreds of mountains destroyed by mountaintop removal, and video and photo accompaniments. The layer was built using Maps, API, KML and a MYSQL database. The case study also highlights our My Connection tool, which allows

Continued on next page

AppalachianVoices BUSINESS LEAGUE

Thanks to the sponsors of our Artists for Appalachia event!

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To become a business member visit AppalachianVoices.org or call us at 877-APP-VOICE

Storming Capitol Hill

On June 2, more than 150 people gathered in Washington, D.C., for the 7th annual End Mountaintop Removal Week in Washington, sponsored by The Alliance for Appalachia. After a day of training, participants spent three days meeting with Congressional representatives to urge them to support legislation restoring the Clean Water Act to its original language, as well as talking with federal agencies tasked with regulating coal mining and its impacts.

On Wed., June 6, a Rally for Appalachia took place in the Upper Senate Park across from the Capitol building. More than 100 people attended to listen to speakers and watched as more than six people shaved their heads in a show of mourning for mountains destroyed by mountaintop removal coal mining.

In addition, thousands of individuals across the country joined the action from afar by contacting or visiting their congressional representative district offices. Independent groups working with AppRising simultaneously staged peaceful sit-ins at four offices throughout Capitol Hill.

By the third day of the Week in Washington, the Clean Water Protection Act, the Alliance's legislation in the House, had garnered 125 bi-partisan co-sponsors from all across the country. Recent cosponsors include Representatives Mike Fitzpatrick (R-PA), Hansen Clarke (D-MI), Janice Hahn (D-CA) and Carolyn Maloney (D-NY).

For more information about the Alliance's efforts to end mountaintop removal coal mining, and to see images from this year's event, visit iLoveMountains.org.

Organizational Roundup

residents to use their zip code to explore their personal connection to mountaintop removal mining, and the new Human Cost of Coal page, built in conjunction with The Alliance for Appalachia and launched on iLoveMountains.org in February.

To date, millions of people have viewed mountaintop removal through the Google Earth layer, and thousands more have accessed the My Connection and Human Cost tools.

Visit google.com/earth/outreach/stories/ to read the case study and learn about other Google Earth success stories.

Meet the Incredible Environmental Duo

Tom Cormons, Deputy Director of Programs and Director of our Virginia office, and his wife Heather recently welcomed to the world not one, but two budding Appalachian Voices conservationists and whitewater rafting enthusiasts (if mom and dad have anything to say about it!). Cassie and her brother Kai join big sister Brooke in rounding out the very active Cormons family advocates. Congratulations!

Making Sure Dominion Doesn't Dominate Our Energy Future

While the Southern Environmental Law Center represented us in front of the Virginia State Corporation Commission (SCC) during a hearing over how Dominion Virginia Power will meet electricity demand for the next 15 years, Appalachian Voices teamed up with the Sierra Club, Chesapeake Climate Action Network and about 50 passionate Virginians outside the building to rally for clean energy. Some attendees wore air breathing masks and black shirts on one side, representing Dominion's current dirty plan, while others wore blue shirts and carried windmills to represent the cleaner alternative.

Dominion, one of the nation's largest utilities, has made no plans for significant investments in renewable energy and instead plans to meet demand through large investments in natural gas plants.

Attendees cited a study that shows that over 10,000 jobs could be created if Virginia took clean energy seriously. Professionals from the medical community and owners of businesses from the solar, wind and energy efficiency industries spoke to the SCC at the rally about the consequences of continuing to depend on fossil fuel power. Virginia State Delegate Morrissey offered the commission a letter signed by 13 other state representatives urging them to reject Dominion's plan outright. The SCC judges may take a month or so to deliberate.

For more on our Virginia coalition work, visit WiseEnergyforVirginia.org.

Appalachian Voices is committed to protecting the land, air and water of the central and southern Appalachian region. Our mission is to empower people to defend our region's rich natural and cultural heritage by providing them with tools and strategies for successful grassroots campaigns.

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A black bear cub takes a break from wrestling with his siblings in the Great Smoky Mountains National Park to pose for Tennessee nature photographer Brian Shults. The playful cubs were found climbing trees in Cades Cove, near the northwest corner of the park. While cubs like these sure are cute, be sure you don't get too close. Federal law prohibits willfully coming within 150 feet of black bears in the wild, and the National Park Service recommends using binoculars or telephoto lens to view the animals. View more of Shults' work at facebook.com/brianshultsphotography.

(To submit a photo for our back page, email backpagephoto@appvoices.org)

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GET INVOLVED environmental & cultural events in the region

Email voice@appvoices.org to be included in our Get Involved listing. Deadline for the next issue will be Sunday, July 15, at 5 p.m. for events taking place between August 5 and October 10.

Floyd Country Store Traditional Appalachian Music

Thurs.-Sat. throughout summer: The Floyd Country Store, home of the Friday night Jamboree, hosts regional Appalachian music Thursdays through Sundays throughout the summer. Floyd, Va. Free Admission. Visit: floydcountrystore.com for the schedule.

Save The French Broad Float

June 9-17: Join the Western North Carolina Alliance for the grand opening tour of the French Broad River paddle trail. During this nine-day trip, paddlers will experience the Biltmore Estate, beautiful Appalachian Mountains, and river rapids while testing water quality along the way. Camping and most meals included. Visit: savethefrenchbroad.com for pricing.

The Harpers Ferry Outdoor Festival & Tim Gavin Down River Race

June 16: This annual event raises money for river conservation and environmental awareness. The festival brings together participants, activists and outdoor enthusiasts. Admission is $10 and is free for participants in the Tim Gavin River Race. Harpers Ferry, W.Va. Visit: harpersferryoutdoorfestival.com.

Listening for a Change: Oral History and Appalachian Heritage

June 24-29: This workshop is designed to explore the means and purposes of story gathering. Participants will have the chance to develop profound listening skills and approaches to interviewing, beyond the mere informational listings of facts and dates generated by traditional oral history. Elkins, W.Va. $195. Visit: folktalk.org.

Cyclo.Via

June 24, 11 a.m.-5 p.m.: Parts of downtown Boone will be closed to vehicles but open to "human powered fun." Bike, walk, run, skate or play in the wide-open roads to promote active lifestyles and safer streets. Visit: boonecyclovia.com.

Stormwater Speaker Series: Vegetated Buffer Zones

June 26, 11:30 a.m. to 1 p.m.: Guy Sabin from the South Carolina Forestry Commission will speak about vegetated buffer zones and how they relate to the draft Construction General Permit. Lunch provided. Seating limited. Tri County Tech Campus, Easley, S.C. Email ehollis@upstateforever.org to register.

A Summer Solstice Event

June 29-July 1: This three-day program aims to help participants identify and clear old patterns and paradigms that hold us back from experiencing The Language of Collaboration in Intimate Relationships with our fellow beings and environment. Sponsored by Sweet Springs Institute, a non-profit organization dedicated to contributing to a new dream for humanity. $60 donation per person. Sweet Springs, W.Va. To register, call 304-536-1207 or email: registration@sweetspringsinstitute.org.

An 18th Century Independence Celebration & Muster

June 30- July 1: Experience the 4th of July, 18th century-style! Walk among historical characters to hear their diverse responses to the declaration. The celebration will take place on Saturday; the muster will continue until Sunday at 3 pm. Elizabethton, Tenn. Visit: www.tn.gov.

Keepers of the Mountain July 4th Festival

June 30- July 1: This two-day gathering will be held at Kayford Mountain's Stanley Heirs Park. It will feature local and regional musicians playing a variety of bluegrass, gospel, country and old time music, as well as poetry and pot-luck meals. Attendees are encouraged to camp out, as local musicians will gather around the campfire to sing at night. Kayford Mountain, W.Va. Visit: mountainkeeper.blogspot.com.

Gathering of the Peacemakers

July 6-8: This three-day yoga retreat features workshops on leading a loving, balanced and sustainable life. At night there will be performances by various artists, wisdom circles and multimedia presentations. High Country Motorcycle Camp, Boone, N.C. Tickets $75, includes camping. Visit: onelovepress.com.

MusicFest 'N Sugar Grove

July 12-13: The 15th annual music festival will celebrate legendary Doc Watson. With small stages, local food, musician workshops and a songwriter showcase, the audience will experience a personal celebration of Appalachian culture. Performers include Carolina Chocolate Drops and the Kruger Brothers. Sugar Grove, N.C. Tickets $20 Friday, $25 Saturday. Visit: MusicFestNSugarGrove.org and CoveCreek.net.

The Whippoorwill Festival

July 12-15: HomeGrown HideAways presents this festival to celebrate Appalachian heritage and traditions while teaching earth-friendly and sustainable living skills in a family-friendly atmosphere. It will feature over 50 workshops, tent camping, healthy, home-cooked meals, and guest speakers. Berea, Ky. Visit whippoorwillfest.com for pricing.

Grandfather Mountain Highland Games

July 12-15: The 57th Annual Highland Games centers around the gathering of Scottish clans. Brawny athletes, delicate dancers, noisy bagpipe band parades, rocking Celtic music and a spectacular highland setting mark this colorful celebration of Scottish culture. Grandfather Mtn., N.C. Visit gmhg.org for pricing.

Music on the Mountain

July 14, 2 p.m. to 6 p.m.: Enjoy traditional bluegrass music as local musicians gather at Table Rock to keep this talent alive. Visitors are invited to bring their acoustic instruments and join in a jam session or simply sit back to enjoy the music a beautiful backdrop. Pickens, S.C. Free with Park Passport Plus. Visit: southcarolinaparks.com.

Brews N' Views Beer Festival

July 21, 2 p.m. to 6 p.m.: Beech Mountain Resort will host a celebration of craft beer complete with live music, views of the slopes from 4,500 feet, activities for children and fireworks at dark. The event will be in the same area as the Mountain Biking Gravity Nationals. Beech Mtn., N.C. Visit beechmtn.com for tickets and pricing.