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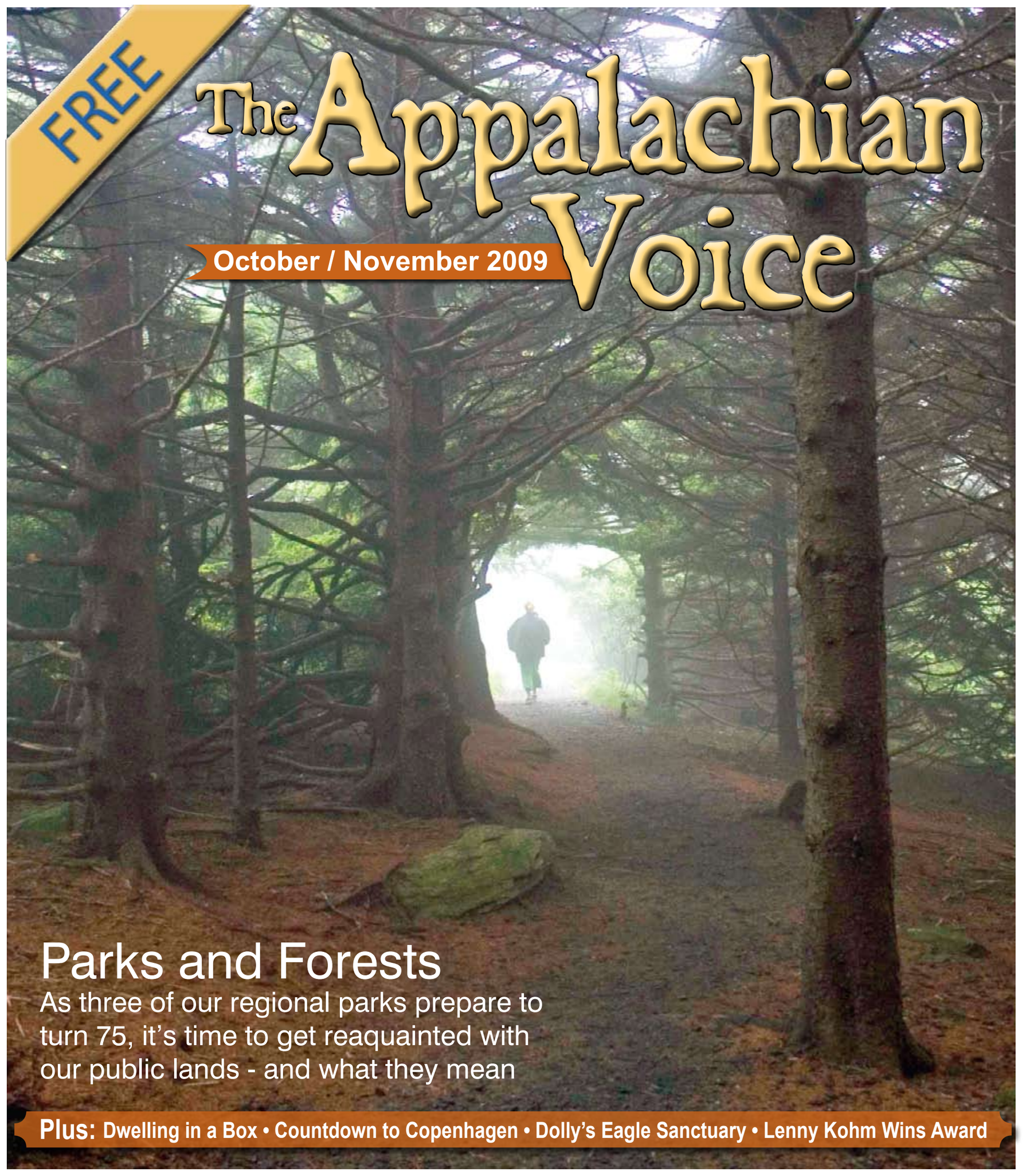
The Appalachian Voice

October / November 2009



Parks and Forests

As three of our regional parks prepare to turn 75, it's time to get reaquainted with our public lands - and what they mean

Plus: Dwelling in a Box • Countdown to Copenhagen • Dolly's Eagle Sanctuary • Lenny Kohm Wins Award

The Appalachian Voice

A publication of

Appalachian Voices

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www.AppalachianVoices.org

Appalachian Voices brings people together to solve the environmental problems having the greatest impact on the central and southern Appalachian Mountains. 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. Appalachian Voices sponsors the Upper Watauga Riverkeeper® and is also a Member of the Waterkeeper® Alliance.

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INSIDE THIS ISSUE

Protecting our Public Lands

As the realities of climate change begin to knock increasingly louder at our door, we must venture into the wild and remember the land we are trying to save. Our National Parks and Forests hold the last unspoiled cradles of biodiversity in the country and offer a glimpse into the delicate, interconnected ecosystem we must strive to protect.

Every Issue:

Cover photo:

Kent Kessinger took this magnificent photograph of a trail through an evergreen forest in southern Appalachia.

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A note from our Executive Director

"Culture springs from the actions of people in a landscape, and what we, especially Southerners, are watching is a daily erosion of unique folkways as our native ecosystems and all their inhabitants disappear." Janesse Ray from Ecology of a Cracker Childhood.

When you destroy the land, you destroy the people.

There was a front page article in the New York Times September 13 that told the personal stories of residents in the town of Prenter, near the state capitol of West Virginia, whose water was so polluted by coal waste disposal that:

"her entire family tries to avoid any contact with the water. Her youngest son has scabs on his arms, legs and chest where the bathwater — polluted with lead, nickel and other heavy metals — caused painful rashes. Many of his brother's teeth were capped to replace enamel that was eaten away. Neighbors apply special lotions after showering because their skin burns. Tests show that their tap water contains arsenic, barium, lead, manganese and other chemicals at concentrations federal regulators say could contribute to cancer and damage the kidneys and nervous system."

This is a story about choices. The article goes on to state "As required by state law, some of the companies had disclosed in reports to regulators that they were pumping into the ground illegal concentrations of chemicals — the same pollutants that flowed from residents' taps." But these companies were never fined nor punished by state regulators. They obviously had higher priorities.

Most of us assume that regulators are doing their jobs and that as a society we can relax and depend on them to do so. But if we look deeply, the Prenter, W.Va. story reappears with different actors in different locations across Appalachia.

I believe it is up to us—you, and me—to be ever vigilant in protecting our Appalachian heritage. If we want to protect our culture we must protect the ecosystems that sustain it from those who do not inherently place an inherent value in clean Appalachian streams and the sound of trees in the wind. We can't look to regulators or even Washington for leadership guidance. The leadership must come from us—the people who live and visit Appalachia. The people who are Appalachia.

We are fortunate to have awe inspiring national parks, remarkable national forests, and wonderful state recreation areas sharing the landscape with private landowners. The health of our ecosystems depends on protecting it all because they are interdependent. You have a powerful voice. Stand with us and have your Appalachian Voice heard.

We're counting on you!

Willa Coffey Mays

Executive Director of Appalachian Voices

Special Thanks to our Mountain Protectors

Mountain Protectors are a special group of members that provide support on a monthly basis to help protect the southern Appalachian Mountains. Mountain Protectors are the backbone of our organization because they provide us with a dependable source of revenue which will enable Appalachian Voices to clean up the sources of air pollution, protect our waterways and forests, and end the devastating practice of mountaintop removal coal mining.

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Through donating money, time or talent, Appalachian Voices' members provide critical support to help reduce air pollution, protect the health of our forests and end mountaintop removal mining. Join us in protecting and restoring our irreplaceable Appalachian heritage. Become a member of Appalachian Voices.

All members receive a one year subscription (six issues) of *The Appalachian Voice*. All donations are tax-deductible.

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Dwellbox: BUILDING BLOCKS FOR SUSTAINABLE HOMES

By Jamie Goodman

Pictured are Dwellbox's first shipping container construction projects. At top, the small, stand-alone apartment on Hill Street in Boone, N.C. At left, a 1,600 sq ft' home called Tad Asana which took three 40' and two 20' containers to construct. The cantilevered design required significantly more engineering than the square apartment building. Photos courtesy of Dwellbox

When you drive by the tiny red house on Hill Street near downtown Boone, it looks like any other college-student dwelling— a small, square, structure with an apartment perched atop a one car garage.

Upon closer inspection, however—perhaps a casual rap of your knuckles against the siding—you will discover that the structure of the house is made not from traditional wood, but the 14-gauge steel hull of a shipping container, the kind that crisscrosses oceans perched in huge stacks—sometimes 9 or 10 high, and as many as 10,000 per load—on cargo ships that ferry imports and exports around the world.

You have just met your first Dwellbox.

An Ocean's Worth of Opportunity

Many shipping containers make only one trip around the world, starting out in countries like China and ending up on the shores of the United States and other consumer countries. It is often cheaper for companies to store the containers rather than send them back empty; between 300,000 and 700,000 empty containers sit dormant in U.S. shipping yards at any given time.

A trend of using these, well, unused shipping containers as building foundations has been growing internationally for years. Places like Australia, New Zealand and Western Europe have embraced the concept of recycled container houses, but the trend has been slower to catch on in the U.S. As of last spring, there were fewer than 80 activated permits for shipping container houses in the entire country.

A little over a year ago, three young entrepreneurs from Boone, N.C.,—Casey Pond, Ethan Anderson, and Jeffrey Scott—became enamored with the concept. The partners all had previously worked on sustainable building and renewable energy projects, so the opportunity to utilize recycled shipping containers as structural building materials seemed a natural fit. Realizing there was a distinct lack of builders offering this unique service, they created Dwellbox.

Their first project was the 320-square foot apartment on Hill Street, constructed of two 40-foot containers cut in half and stacked. It was a learning process for the group, but after 90 days, some broken tools, and a little sweat and determination, the first dwellbox was complete.

"The steel [in shipping containers] is very strong, not the type you can use a normal skill saw on," Dwellbox Principal CEO Casey Pond said with a chuckle.

From an environmental standpoint, using recycled shipping containers as the structural element of a home is a no-brainer. "For the basic building block you start with, you do not have to use any new product," said Pond.

From a framework standpoint, the benefits are simple–the heavy-grade steel superstructure and exoskeleton or "skin" means less need for reinforcement and fewer structural concerns, allowing the containers to be cantilevered , stacked , or cut to produce large clear spans.

Add in the speed of construction, inherent added efficiency (shipping containers are almost air-tight from the start), and a lower cost per square-foot than traditional frame homes, and shipping container dwellings firmly establish themselves as a formidable alternative.

"Like Adult Legos"

Preparing a shipping container for a house is relatively simple in terms of construction. In-house designer Adrian Tate works with the client to determine the basic schematics of the structure; an engineer then makes alterations to ensure the designs match with the structural integrity of the shipping container and the technical requirements of the construction site. Welding cuts are made into the container's steel using heavy-duty welding tools, carving out door and window holes and removing walls where two containers will be connected together to make a larger space.

The containers are then driven to the site and cranes hoist them into position on the foundation, which can be like traditional home foundations or more unusual such as concrete pylons.

The interior is finished very similar to a regular home. An interior frame is constructed, drywall is applied, and insulation sprayed between the inner and outer walls. Isonene is the preferred insulation for shipping container homes, as the primary—and indeed one of the few—issues with these dwellings is a tendency to create condensation, and the sprayed insulation creates a barrier which eliminates this problem. Plumbing, electricity, and other finishing jobs are applied in the normal fashion.

Dwellbox is currently able to build a turnkey shipping container home for around $100 a square foot in a market that averages between $150 and $350 per square foot for a traditional structure. The company can also just design and prepare the steel structure, letting the client either do the interior work themselves or subcontract the finishing work themselves. How little—or how much—a client spends on a home depends of course upon the complexity of the design and the extent of finishing touches.

"A lot of people that are into container homes are into more contemporary designs," said Pond, "but the truth is you can make them look like anything, even a log cabin."

The sustainability of the interior work that Dwellbox does is entirely up to the client. "We openly advertise that we are adept at integrating renewable energy into our structures," said Pond.

Building Out

Aside from their residential dwellings, Dwellbox is working to bring the concept of "shipping containers as building blocks" into other, less mainstream, markets.

Their newest project, still in the design phase, is a Mobile Learning Lab for Caldwell Community College in Lenoir, N.C. The school, recently awarded the state's Green Business Fund, wanted to use the funds to create a lab for teaching aspects of traditional trade skills integrated with renewable and sustainable technologies.

The partners are also hoping to venture into temporary workforce and disaster relief housing for governmental agencies such as FEMA and Homeland Security. They have proposed converting shipping containers into rapid deployment structures that would be far sturdier than traditional tent cities often erected in disaster zones such as in the Gulf Coast in Hurricane Katrina's aftermath.

"In the whole disaster relief area, we stand alone," said Pond.

Finally, the Dwellbox team hopes to educate other builders, and even the government, on the benefits of recycling shipping containers. "We are working on trying to put together a guide on how to work with the containers," said Pond. "Since there is no building code for these structures yet, we also hope to help set the code standards so that you wouldn't have to get an engineer for these projects."

DWELLBOX

Dwellbox, based in Boone, N.C., is formally incorporated as High Country Green Box, LLC. For more information, visit their website at www.dwellbox.com

Chasing Copenhagen

In search of climate consensus before the December 2009 summit

Part I of 2

By Bill Kovarik

So *this* is the speed of light.

We laugh as the solar-powered boat glides silently down the Spree River through the heart of Berlin, Germany. As monumental buildings drift past, our captain, Arno Paulus, points out a series of 64-year-old bullet holes in the stone walls alongside the river.

It's a sobering moment in the new Berlin, a city where ghosts still flit through the Tiergarten and where hollowed-out churches still draw crowds on the Ku-Damm boulevard.

Capt. Arno Paulus pilots a solar photovoltaic boat down the Spree River in Berlin. The boat cruises at about 2-3 knots on one KW of rooftop PV power. Dozens of these boats, and thousands of less photogenic photovoltaic installations, dot Berlin and the German countryside, due in part to strong government subsidies. Photo by Bill Kovarik

And it's because of this past, Paulus says, that Germany has a moral obligation to help change the world. "We can do it," he says, "but we can't do it alone."

And so our journey starts with a photovoltaic boat tour as a kind of tribute to the new Germany, grimly aware of its history but determined to set the example for a remarkable future.

Its all part of the "road to Copenhagen" climate change tour that also includes formal meetings with German officials and informal talks with German scientists.

I'm among seven American journalists who have been invited to Germany and Denmark by both governments, to see first hand the commitments and the costs, as the world considers what might be done at the international climate summit planned for Copenhagen in December of 2009.

Appalachian Voice is very welcome, one German official says diplomatically, because Appalachian coal is so well known in Europe. But Europe is in the process of closing down its coal fired electrical plants, and he hopes that we will convey this message: that change need not be disruptive; that new jobs and economic stability can come from renewable energy; and most of all, that the world needs American leadership.

That leadership could take a page from the European example.

With more than 15 percent of Germany's electric supply coming from wind, hydro, biomass and solar, the renewable energy and conservation sector has grown to over 280,000 jobs – nearly 10 times more than those employed in coal mines. The program is projected to grow to half a million jobs by 2020.

The reason for all this is to comply with international carbon reduction treaties, such as Kyoto and the anticipated Copenhagen treaty. Germany has reduced CO2 by nearly 20 percent so far, and is willing to reduce 40 percent as compared to 1990 levels, and possibly more, if the Americans will join the effort.

Not all of this is to be taken at quite face value--as much as half of the reduction in CO2 came rather easily, from shutting down inefficient steel mills in East Germany after the wall came down.

But in a way, that's part of the point. By shutting down the inefficient mills and turning to renewables, they are creating cleaner new industries with more long term employment.

Rather than costing money, the government projects in the climate protection plan will increase GDP by over 50 million Euros.

One reason that renewable energy has grown so quickly in Germany is that the subsidies work through a "feed in tariff" mechanism. At present, wind energy receives about 13 cents for onshore and 19 cents per kw for offshore production. The rate is higher offshore because Germany wants the turbines further out than is usual, where there is little danger to bird life. Also, solar photovoltaic panels receive a 48 cent per kilowatt hour subsidy.

The rates are high, but they reflect new production, European prices for electricity, and the avoided costs of environmental impacts from other technologies. The fact that they don't have to clean up ash spills, for instance, is worth a few cents at least. Also, the rates are continually reduced as costs for new energy production from renewable energy come down. Photovoltaic panels for instance cost about half of what they did only five years ago. Wind turbines, too, have become more reliable and easier to set up and operate, and "smart grid" renewable energy systems are being built with the enthusiastic cooperation of the utilities.

The "feed in tariff" is a structure that is being adapted around the world. While something like it was used to start wind farms in California in the 1980s, Germany and other European nations have spent a decade developing the complex program.

The feed in tariff means that anyone can buy a set of photovoltaic panels, or a windmill, and get help and technical advice, and then collect a check every few months based on how well the panels perform. Individuals and companies of various sizes – and not just the government or the utilities – are making investments and innovations because there is a predictable rate of return based on performance.

The feed in tariff is set so that there is about a 10 to 12 year payback period for the equipment, after which, the checks keep coming and the owner of the panel continues to make money.

Next issue: Danish wind and biogas power

Hiking the Highlands

Joe Tennis is taking a break from Hiking this issue to visit with Dolly Parton in Dollywood (see page 20 in our parks section). He will return in December with another great hike!

Appalachian Trail: "A Great Trail from Maine to Georgia!"

Story by Stephen Otis

If you were to somehow locate a *New York Evening Post*, circa 1922, you would read this same headline. Penned by Raymond H. Torrey at the behest of William Welch, director of the *Palisades Interstate Park Commissio*n, the article dared to imagine, as Benton MacKaye had one year prior, a grand path connecting forest and farm all the way from Maine to Georgia.

Today, you can see that vision in splendid array. In fact, if you want (and why wouldn't you want?) you can hike the length of the great Appalachian Trail. You don't really even need maps. More than 165,000 white blazes on the trees mark the way. In fact, right now, there are several hundred people doing that very thing.

And as fall approaches, we congratulate them. Almost at Katahdin, the end, you brave (some say crazy, I say willing) souls. And you (yes, crazy) Southbounders, you're almost at Springer. If you've not ever seen Katahdin, you must. Like a crown she rises toward the heavens, surrounded by a subservient wilderness of swamp and pine. Her crest is breathtaking, a fitting reward after climbing up miles of stones the size of Jack's giant's bigger toes.

As we welcome the thru-hiker class of 2009 to the roster of the 10,000 others who have taken the five million step, 2,175 mile jaunt through fourteen states, six national parks, eight national forests; past the 2,000 rare plant and animal species; over trail that thirty clubs and multiple partnerships (some 40,000 people) maintain; we do so with a hearty, "Thank you." As do those who have gone before you.

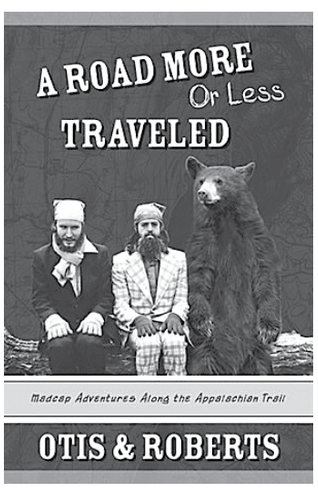
The *Appalachian Trail Conservancy* also thanks you. Founded in 1925, they were the force behind the 1968 legislation that declared the AT America's first national scenic trail.

Myron Avery thanks you, whose vision carried the Trail northward into Maine. "Follow the Appalachian Trail across Maine," Avery wrote. "Remote for detachment, narrow for chosen company, winding for leisure, lonely for contemplation, it beckons not merely north and south but upward to the body, mind and soul of man."

Earl Schaeffer thanks you, the first thru-hiker on record. That was 1948. He did it again in 1998 (at nearly 80 years of age), proving that retirement needs no Winnebago or comfy chair.

And I thank you.

My own thru-hike began in 2002 as somewhat of a fluke. Colin Roberts, my hiking buddy, had dreamed of the long walk since he was five, when he met a thru-hiker on the outskirts of Damascus.



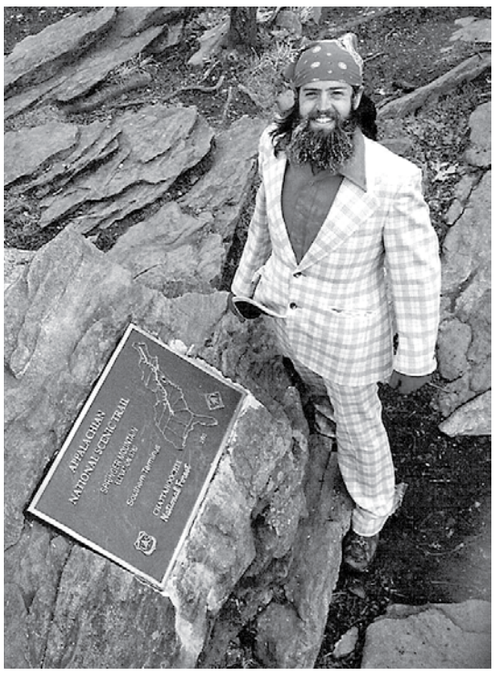
A giant to the young Colin, this hiker was weathered and worn, but steady like Odysseus on his way home. "You're going where? And you came from where?" It was implausible to the boy that a man could walk through 14 states in one bound, something only a dream could conjure, but when he became a man, Roberts found that dream a reality, standing on the granite ribs of Katahdin.

And there I was with him, decided only a few days prior to get some gear (55 pounds of it!) and accompany his southbound trek to Springer Mountain, Georgia. Legs like used station wagons and a heart coated in buttered popcorn. No practice hikes, no cardio, not even a casual yoga session. Three days in, I hated everything in my entire world. Flies, mosquitoes, ticks, blisters, pools of humidity—demons.

"You're a thru-hiker?" a man asked, finding me 80 miles into the wilderness, in a puddle, rubbing mud all over my body (because it felt cool). And that dumb smile planted on my head as I said, "SOBO'02, you bet!" He tossed me some hope in the form of beef jerky and said, "See ya at Springer. Maybe."

"What's Springer?" I said, cake-faced in Trail chocolate.

But there we were five months later, Colin and I, sitting next to a fire 12 miles from Springer, a cold fog rolling in, sipping on coffee, slowly taking in what this day would hold: the end. What end? The days, goals, miles, exhaustion. The torment of probing questions. The laughter in the hills. The sorrow in the trees. All a part of us now, a steady foundation against a former foe called chaos and clutter. And I didn't hate a single thing this morning. I was, maybe for the first time in my life, steady. And Colin's dream, well, he was awake, smiling contentedly in the fog.



Author Stephen Otis stands on top of Mount Katahdin at the start of his 5-month southbound trek on the Appalachian Trail. Photo courtesy of Stephen Otis

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Stephen Otis and Colin Roberts' are the authors of "A Road More or Less Traveled," recipient of three Book of the Year awards and the 2009 Eric Hoffer Da Vinci Eye Award. The book novels their 2002 thru-hike from Maine to Georgia. Visit readaroad.com or Amazon to purchase a copy.

Southern Appalachia Supports Independent Film with Ten-Day Festival

By Julie Johnson

"Once there were brook trout in the streams in the mountains. You could see them standing in the amber current where the white edges of their fins wimpled softly in the flow. They smelled of moss in your hand...On their backs were vermiculate patterns that were maps of the world in its becoming...In the deep glens where they lived all things were older than man and they hummed of mystery." - Knoxville writer Cormac McCarthy

For centuries the magic and mystery of Appalachia's landscape has inspired artists and authors. The deep greens and heavy mists of the mountains lend themselves to breathtaking description, expressed in words, paints, and—celebrated this October—in cinematography, as East Tennessee State University hosts the Southern Appalachia International Film Festival.

The opening gala will be held Oct. 22nd, as ETSU's Center and Archives for Appalachian Studies brings *"Stark Love"* to the Paramount theater in Bristol. This remarkable 1927 silent film was shot completely in North Carolina's Unicoi Mountains, with almost all Appalachian actors. It is a window to the wilds of early 20th century Appalachia. This is only the third time the film has been shown in the region. The movie's original score will be played on the Paramount's Wurlitzer.

Films like *"Stark Love"* exemplify the festival's mission to encourage film production and culture in Southern Appalachia, as well as to preserve the work of past generations of regional filmmakers. From Oct. 22nd to 31st, ETSU will host over sixty film screenings on topics ranging from Appalachia to Andy Warhol's original films. There will also be an installation of art films at Johnson City's Tipton Street Gallery.

Three awards will be given out in the name of Mary Jane Coleman, the founder of the Sinking Creek Film Celebration. Sinking Creek, now the Nashville Film Festival was started in 1969 and is the longest continuously running festival in the American South. Coleman's mission was to celebrate film without studio fanfare, and to encourage cinematic education in the region.

Environmental films will be shown between Oct. 24th and 27th, and Appalachian films from Oct. 28th to 31st at the Rogers-Stout Theater. Wednesday, Oct. 28th, at 5 p.m., there will be a panel discussion with Appalachian filmmakers. All screenings will be shown for free in order to promote education for viewers and exposure for filmmakers. The schedule can be found at the festival's website: www.soapiff.com.

7th Annual AMPC Photography Competition Focuses On Appalachia

Photographers of the world, it's time to focus your lenses on Appalachia.

Amateur and professional photographers alike are encouraged to enter The 7th Annual Appalachian Mountain Photography Competition (AMPC), which focuses on images that portray various aspects of Appalachian life.

The competition is divided into seven separate categories, and over $4,000 in cash and prizes will be awarded.

New to the competition this year, Appalachian Voices will be sponsoring supporter the environmental category, now known as "Our Ecological Footprint." Entries to the category should document environmental injustices and detrimental practices that are damaging the rich ecosystems of the Appalachian mountains.

"We hope the images submitted will create for the viewing public a visual connection to the scope of the environmental damage occurring in Appalachia and empower people to become involved," said Sandra Diaz, Development Director for Appalachian Voices.

"The Environment category has consistently received the fewest submissions of the 7 categories of the competition," said Andrew Miller, Coordinator for Appalachian State University's Outdoor Programs and competition Director. "Appalachian Voices advocacy on issues important to the [Central and] Southern Appalachians will bring focus to this category and will allow us to tap into the broad network they have developed in more than a decade's work."

Wonder Collides by Jessica Maceda, 2009 Winner, Flora and Fauna. Courtesy ASU Outdoor Programs

Competition categories include: Adventure; Blue Ridge Parkway Vistas; Blue Ridge Parkway Share the Journey®; Culture; Our Ecological Footprint; Flora and Fauna; and Landscape.

The show will be judged by regional photographers, and chosen entries will hang in an exhibition at Appalachian State University's Turchin Center for the Visual Arts in Boone, N.C., March 5 through June 5, 2010.

Deadline for the competition is 5 p.m. on Friday, Jan. 29, 2010. Photographers must be 13 years of age or older to enter. Please visit www.appmtnphotocomp.org for details or to enter the competition. For more information, call ASU Outdoor Programs at 828-262-4954.

The AMPC is a partnership between Appalachian State University's Outdoor Programs, The Turchin Center for the Visual Arts and the Blue Ridge Parkway Foundation, and is made possible through the sponsorship of: Virtual Blue Ridge; Appalachian Voices; Bistro Roca, Inventive American Cuisine; Footsloggers Outdoor and Travel Outfitters; Mast General Stores; and Peabody's Wine and Beer Merchants.

SERENA: Historical Fiction with a Taste for Blood (and Timber)

By Sarah Vig

Set in the mountains of North Carolina during the early years of the Great Depression, the landscape of Ron Rash's "Serena" (Harper Collins, $24.95) is at once familiar and foreign. Serena is the new bride of timber baron George Pemberton--she is anything but!

Smart, beautiful, and fiercely independent at a time when most women are decidedly not so, in a different novel she might be a likeable character.

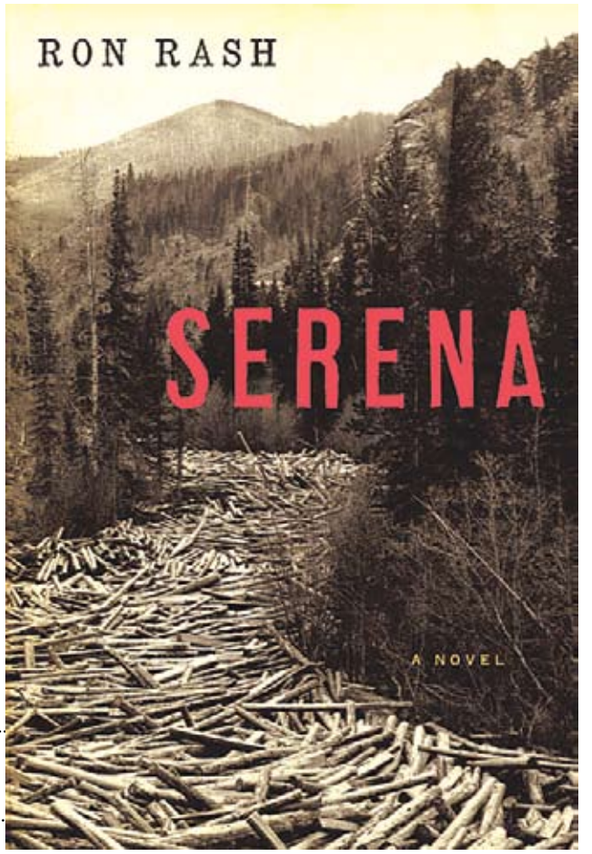
Pemberton's business at the time left no tree standing as a matter of course. So while the mountain ridges and small Appalachian communities could just as soon be set now as then, the denuded slopes remove that timeless quality from the setting and imbue an eerie feeling of iniquity.

The drama of the Pembertons' timber take-all is countered by the loosely historical sequence of events leading up to the creation of the Great Smoky Mountains National Park, which becomes a welcome doomsday clock of sorts for the Pembertons' seemingly limitless thirst for natural resources at any cost.

Though at first it seems Serena will play second fiddle to her husband's ruthlessness—he murders a man in public within the first few pages—she quickly steps up her game. Like the old-growth forests she and her husband are clear-cutting, Serena overtakes the landscape of the novel by eliminating everything around her.

By the end of the novel, Serena is almost a caricature of evil, a sort of Cruella DeVille of timber. And yet, while most of the novel's events are fictitious, it is always apparent that the timbering actually happened. Perhaps Rash chose his setting and created this character in order to try and imagine a person whose greed and ambition were so great they could justify the destruction of such beauty.

In the end, "Serena" is a drama of passion, greed, ambition, love and betrayal that is more than just a good story, though it is that; it is an evocation of a time, a place and a people and an interrogation of morality and justice.



The wanton greed of a timber baroness takes center stage in this depression-era drama.

Reading Questions

1 At a speaking engagement on the campus of Appalachian State University, Rash admitted to being a prolific re-writer, having done 14 drafts of "Serena" before publishing. According to Rash, Rachel Harmon was not a major character in many of the original drafts and "revealed" herself in his revisions. What effect do you think her presence had on the novel? How do you think it would have been changed if she had been only a minor character?

2 Almost from the point of her introduction, Serena is fixated on Brazil. What do you think is the root of her obsession? Does it represent something to her?

3 What do you think motivates Serena? Does this change during the course of the novel? Is it the same for Pemberton?

4 Serena's eagle figures greatly into the way the loggers in the camp perceive her. Did it change your perception of her character? What do think the eagle and its hunting might symbolize?

Online Resources

On YouTube

Serena's trained hunting eagle in the book was inspired by the Mongolian tradition of mounted hunters using eagles to catch prey, such as fox and wolf, for their coats. You can watch footage of such a hunt on YouTube. Despite its German narration, it is both breathtaking and awe-inspiring: **www.youtube.com/watch?v=5wwvPLPntZk**

Websites and Blogs

Just as the fight against private interests to establish a national park in the Smokies is based on history, the character of Kephart, a reclusive but impassioned writer advocating for a park, is based on a real person. Western Carolina University has produced an in-depth online exhibit titled "Horace Kephart: Revealing an Enigma," which does just that. It contains photos, pages of Kephart's manuscripts, and correspondence discussing the preservation of the Great Smoky Mountains: **wcu.edu/library/digitalcoll/kephart/index.htm**

"National Parks: America's Best Idea" is a new six-part PBS series which initially aired Sept. 27. The series explores the origins and history of the national park system, people who made a difference and park profiles. A companion website is slated to launch when the series premieres. **pbs.org/nationalparks**

Further Reading

"Pemberton's Bride," a short story by Ron Rash, served as the seed for "Serena." Reading it gives you an insight into the creative process and how stories are crafted. The story is part of a larger collection of stories set in contemporary Appalachia titled "Chemistry" (Picador, $14).

Across Appalachia Environmental *News From Around The Region*

As Natural Gas Heats Up, Issues With Extraction Expand

By Maureen Halsema

Natural gas is one of the cleanest burning fossil fuels, but as it grows in popularity, concerns are expanding about extraction methods and the gas' inherent volatility. The Appalachian Basin region is home to one of most expansive reserves of natural gas—the Marcellus Shale. This reserve lies over a mile beneath the surface and covers a 54,000 square mile area, encompassing West Virginia, Kentucky, Tennessee, Pennsylvania, New York, and Ohio. The region is believed to contain 50 trillion cubic feet of natural gas, enough to fill the New Orleans Superdome approximately 327,000 times. According to the U.S. Department of Energy, "Natural gas consumption in the United States is expected to increase from about 22 trillion cubic feet in 2006 to 23 trillion cubic feet by 2030."

Over the last couple of years, several gas leaks across the nation have led to reported incidents. In some cases, explosions result from gas migration caused by mining operations. According to Pennsylvania's Department of Environmental Protection, "Active underground mining operations can lower groundwater levels, reducing pressure in aquifers occurring above and adjacent to the area of coal extraction. This reduction in pressure can allow gases within the overlying rock layers to migrate into nearby wells." If these wells are not properly vented, the accumulated methane can lead to explosion, which is what happened in Dimock, Pa., earlier this year. Maintenance of the vast lengths of pipelines that transport the gas is also risky. For instance, on Sept. 14, 2008, a Williams Gas pipeline burst due to external corrosion in Appomattox, Va. The blast shot flames 300 feet in the air, leveled two homes and injured five people. The pipeline that exploded was one of three lines that run from the Gulf of Mexico to New York.

The most commonly employed method of natural gas extraction is called hydraulic fracturing. This process involves injecting a mixture of sand, millions of gallons of water, and an undisclosed chemical cocktail into the gas wells. The pressure of this injection fractures the coal bed seams and forces the release of natural gas. One of the major concerns involved with hydraulic fracturing, is that as of 2005, natural gas companies have been exempted from the Safe Drinking Water Act, which protects the public's drinking water and dictates what chemicals can legally be injected into the ground. "As the law currently stands, the EPA is not allowed to set conditions for hydraulic fracturing or even require states to have regulations of their own," said Abrahm Lustgarten in his article, "Natural Gas Politics" published in ProPublica in May. "States often look to the federal agencies for guidance on how to craft environmental rules. And hydraulic fracturing is an especially complicated process that scientists say warrants more study."

Judge Recused in Mingo Water Trial

By Julie Johnson

This summer, 735 Mingo Co, W.Va. resident's quest for civil restitution and medical monitoring was the focus of a series of judicial controversies.

Since 2004, these individuals have been involved in litigation with Massey Energy over their water. They claim that coal slurry—the byproduct of washing raw coal to remove combustible elements—infected local aquifers with heavy metals and toxins for decades, causing chronic illness, organ failure and tumor growth. Massey subsidiary Rawl Sales was permitted to inject coal slurry into nearby abandoned mines from 1978 to 1987.

Judge Michael Thornsbury presided over the case since the beginning. On Aug. 19th, West Virginia Justice Robin Davis concluded "past relationships could create the appearance of impropriety and lead to questions about [Thornsbury's] impartiality," and disqualified Thornsbury from the case.

These questionable relationships were brought to the state's Supreme Court in a recusal motion by Thompson Barney, the law firm representing the plaintiffs. They call Thornsbury's action throughout the trial "cronyism at its worst, a clear violation of canon and a slap in the face to the plaintiffs."

The settlement agreement in the Mingo case calls for a comprehensive medical monitoring program. Judge Thornsbury named Massey contractor Dr. C. Donovan Beckett as administrator of the program. Beckett is also Thornsbury's business partner, and former campaign manager. He worked with Massey's attorneys to throw a fundraising gala for Thornsbury's campaign.

Judge Michael Thornsbury

The original draft of the medical monitoring program included an epidemiological study of residents' illnesses and connection to coal waste. Though he had originally agreed to support this portion of the program, at trial Thornsbury allowed Massey's objections to it.

The company has yet to explain its reasons for denying this vital part of the settlement. Their insurance company is providing the funding for medical monitoring. With no financial stake in the administration or oversight, Thomspon Barney says Massey's objective is to "hide the truth about the true extent of slurry's health effects on the Plaintiffs."

They also claim Thornsbury maintained an *ex parte* relationship with Massey CEO Don Blankenship. The two were seen dining together between the time that a settlement was reached and a subsequent hearing in which Massey claimed they were unable to pay the agreed upon amount.

As president of Rawl Sales, Blankenship personally ordered coal waste to be injected into abandoned mine sites. Yet, Thornsbury issued an order precluding plaintiffs from questioning Blankenship about his personal knowledge concerning injections.

This is not the first time Blankenship's relationship with the West Virginia judicial system has been a topic of controversy. In 2007, while Massey was appealing a $82 million settlement verdict in the West Virginia Supreme Court, Blankenship spent $3 million out of his own pocket to unseat incumbent Justice Warren McGraw in a judicial election.

McGraw's opponent, Brent Benjamin, won and cast a pro-Massey vote in a 3-2 decision to overturn the verdict. Another pro-Massey vote in the decision was cast by Justice Spike Maynard, who was photographed vacationing with Blankenship in the French Riviera in 2006.

In 1985, as a private attorney, Judge Thornsbury represented Massey Energy in a suit bought against the company by coal field residents over blasting near their homes. Justice Davis found this to be the most overwhelming reason for recusal. The ruling will likely delay the start of the trial until late October.

Across Appalachia Environmental *News From Around The Region*

Tennessee Student Environmental Alliance Connects Children with Nature

By Julie Johnson

Students in eight Chattanooga-area schools are helping to clean up the greater Tennessee River watershed. Focusing their efforts on the "Ridge to River" system, the students learn about their water and the effects of pollution on its quality, from the small streams at the tops of mountains to the large rivers in the valley.

Mary Beth Sutton, executive director for the program, started teaching integrated watershed management to students in the Caribbean in 2004. The goal was to empower students to be leaders in the protection and restoration of their local environment.

Caribbean students now manage island programs largely on their own, testing water quality in their bays and inlets, assessing the health of mangrove fields and coral reefs, and starting environmental clubs in their schools and churches. One Dominican student even appeared before her town council, presenting an idea for a village-wide composting program.

"Environmental concern is ingrained in them by the time they are adults," Yasmin Francis, a Caribbean SEA summer camp leader said. "So that they can actively demonstrate their concern for the environment and also teach others."

Sutton hopes to continue the success of watershed preservation with the burgeoning projects in the Tennessee Valley. TenneSEA students have conducted quarterly water testing with equipment donated by the Tennessee American Water Company, and are working with established community groups to conduct river clean-up days.

For more information about the water program, visit www.caribbean-sea.org

Students in the new TenneSEA program test water in the Tennessee River watershed under the guidance of executive director Mary Beth Sutton. Photo courtesy of TenneSEA

Kentucky Institutes Task Force on Biofuels

A task force on biofuels and biomass appointed by Kentucky Governor Steve Beshear held their first meeting in September. The group was formed as part of Kentucky's recent energy initiative, titled "Intelligent Energy Choices for Kentucky's Future." The group hopes Kentucky can produce enough biofuel by 2025 to cover 12 percent of its transportation fuel demand. Senators and State Representatives will work with farmers, the Director of the state Nature Conservancy, academics from UK's agriculture program and the President of the Kentucky Woodland Owners Association to craft legislation and programming to achieve these energy goals.

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West Virginia Most Medicated State

West Virginia topped the list of the nation's most medicated states in a prescription drug study published in Forbes magazine. The study found West Virginians filling 17.7 prescriptions per person last year, far exceeding the national average of 11.5. The top three selling drugs were all cardiovascular, followed closely by pain-relievers and anti-depressants. West Virginia is also above the national average in heart-disease related deaths. State officials say they are starting programs to encourage life-style changes and educate about nutrition and smoking prevention in teens. Officials warn the high rate of chronic diseases may take a long time to overcome.

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Male Fish Producing Eggs

In West Virginia's Potomac River, widespread populations of "intersex" fish have been found. In June 2009, a study spearheaded by the US Geological Study found that endocrine-blocking chemicals, present in pesticides, plastics, flame retardants and personal-care products, are causing abnormalities in fish, such as egg production in males. These chemicals, which heavily pollute the Potomac's watershed across four counties, have been found to prevent the normal secretion of hormones during maturity. The West Virginia Cancer registry have found potential links between the intersex phenomenon in fish and human cancers prevalent in the region.

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Tennessee Institutes Drinking Water Initiative

Tennessee Governor Phil Bredesen announced that 10 small counties in the state will receive grants to train water quality professionals. The funding, provided by the American Recovery and Reinvestment Act, will go to counties whose drinking water systems service 10,000 people or less and whose unemployment rate is more than 10 percent. Bredesen says the program "will provide jobs and help these communities ensure their drinking water systems continue to be managed to protect public health." The Department of Environment and Conservation will make site visits throughout the program's first year to ensure it is sucsessfully conducted.

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Wild South to Map Cherokee Nation Trails

Wild South, a southern conservancy organization, The Southeastern Anthropological Institute and The Mountain Stewardsare are partnering to produce a map of the Cherokee Nation's roads and trails system prior to 1838. This complex interstate system was a maze of hunting trails, foot paths and horse roads that crisscrossed Southern Appalachia. Mapping these routes will give researchers important insight into population shifts, tribe relocation, and animal and environmental interaction. The information to construct these maps will be gleaned from early federal surveys, historical maps, independent research and accounts from early travelers in the region. The completed maps will be an educational tool and hopefully be included in the National Historic Trails System.

EPA Grants Temporary Stay of Execution for Over 79 Mountains

Story by Sandra Diaz

In line with an interagency "memorandum of understanding," the Environmental Protection Agency announced their recommendations on 79 valley fill permit applications associated with mountaintop removal coal mining. In a move that pleased environmentalists and coalfield residents in central and southern Appalachia, the EPA wants to further review all 79 permits for possible violations of the Clean Water Act.

EPA Regional offices were given 14 days to review the EPA Headquarters' recommendations after which the list will be finalized. Any permits the EPA regional wants approved will be sent to the Army Corps of Engineers for final approval. If the regional offices agrees with the headquarters' assessment, the EPA and the Army Corps of Engineers will enter an "enhanced coordination" process, where the EPA and the Army Corps of Engineers will study each permit on a individual 60 day time frame.

Willa Mays, executive director for Appalachian Voices was delighted about the EPA's announcement. "EPA Administrator Lisa Jackson, Army Corps' Assistant Secretary Jo-Ellen Darcy and Principal Deputy Assistant Secretary Terrence "Rock" Salt have shown exceptional leadership. This is indeed good news especially paired with the fact that 156 members of the House of Representatives are now cosponsors of the Clean Water Protection Act."

The EPA's announcement of the 14-day review results, originally scheduled for Sept. 25, was delayed beyond our deadline. Visit AppVoices.org for the lastest news.

Reaction from the coalfields was mostly optimistic. Chuck Nelson, retired union coal miner from Glen Daniel, W.Va., and board member of the Ohio Valley Environmental Coalition said, "By recommending these permits be further reviewed, the EPA is allowing a temporary reprieve for the people of Appalachia. It appears the EPA is starting to take the concerns of coalfield residents into account when considering these permits."

Astroturfing vs. Grassroots—The Debate over Coal Continues

By Sandra Diaz

Fake FACES, false FORCE, and astroturf lobbying. During the past two months, the coal industry was rocked by scandals that stemmed from backfired public relations campaigns.

It started when ACCCE, the American Coalition for Clean Coal Electricity, hired Bonner and Associates to help influence Congress to vote against climate legislation. Bonner and Associates sent out over a dozen fake letters using forged letterhead from actual minority, elderly and veterans organizations to members of Congress. Several weeks later, southern electric utility Duke Energy and Alstom Power severed ties with ACCCE, citing opposition to their stances on climate change legislation.

Shortly after, online magazine Grist.org revealed that a Pennsylvania coal-industry group calling itself Families Organized to Represent the Coal Economy (FORCE) was not actually comprised of families. The group, responsible for billboards in Pennsylvania promoting "clean coal," limits membership to "any Pennsylvania company doing business with the coal industry" and "coal and coal company-related sponsorship."

A new industry front group, the Federation for American Coal, Energy, and Security (FACES) appeared online claiming to be an "alliance of people from all walks of life who...educate lawmakers and the general public about the importance of coal." Appalachian Voices' staff, however, revealed that the photographs of members on the FACES website were actually images purchased from a stock photography company.

A boulder from a mountaintop removal site crashed into an elderly couple's home in Floyd County, Kentucky. Photo by Lauren McGrath, Sierra Club KY Beyond Coal

Coal Numbers Down

Recent figures show that coal is producing a smaller percentage of the nation's electricity than ever before. From January to May 2009, coal produced just 45.4 percent of the country's electricity, and the monthly numbers continue to fall.

Massey Energy, known for being mostly anti-union in West Virginia, hosted a "Friends of America" featuring pro-mining and anti-environmentalist speeches. This rally, held on a reclaimed mountaintop removal site, was called a "labor day" rally, even though the United Mine Workers were holding their 71st annual Labor Day picnic about an hour away.

It's Getting Hot in Here

Protests continue in southern West Virginia, as Climate Ground Zero and others campaign to end mountaintop removal.

On Aug. 11th, over 100 citizens gathered at the West Virginia Department of Environmental Protection to ask Secretary Randy Huffman to resign. Four protesters chained themselves to the doors and were arrested. Simultaneously, Ohio Valley Environmental Coalition and Coal River Mountain Watch petitioned the federal Environmental Protection Agency to take over the WVDEP, citing the state agency's failure to fill nearly 100 vacant positions in recent years and its inability to protect the environment.

Two weeks later, Laura Steepleton and

Continued on next page

Public Hearings Discuss Duke Energy Rate Increase

By Julie Johnson

Duke Energy customers and concerned citizens are challenging the North Carolina electric utilities provider over a proposed 18 percent rate increase.

The utility provider is proposing a 13.5 percent increase for residential consumers to support the projected $1.8 billion costs of an 825 megawatt upgrade to the coal-fired Cliffside Steam Station in Rutherford County, N.C.

Added to the initial 13.5 percent will be another 4.5 percent to cover the rising cost of coal.

Duke Energy says that the current rate is "not sufficient to meet day-to-day expenses, build cleaner and more reliable energy infrastructure, provide a fair return to our investors, and maintain a strong financial position."

Since its inception, environmental groups have challenged the Cliffside plant. A 2007 air-quality permit issued by the state was overturned a month after construction began. Environmental groups, led by the Southern Alliance for Clean Energy, found that the permit violated the Clean Air Act because it did not allow for testing the station's equipment for controlling mercury emissions. However, Duke was allowed to continue construction while the company sought and was eventually granted the necessary permit from the state.

If the rate increase is permitted, it will go into effect in January 2010. The North Carolina Utilities Commission is holding regional public hearings for citizens to voice their opinions. At the Sept. 17th hearing in Marion, N.C., Duke Energy customers and concerned citizens expressed their objections to the increase and to the Cliffside construction project.

The McDowell County school board voted unanimously to reject the rate increase. A proposed 11.2 percent rate increase for government agencies would cost the school system an additional $89,000 for the 2010 school year, an amount McDowell says it cannot fund. A representative for the Board of Education told the Utilities Commission that it was "an increase the school system, barely able to afford text books, cannot bear."

J. Robert Boyette, City Manager of Marion, N.C., told the Utilities Commission that a proposed 16.7 percent increase in municipal outdoor lighting would impose an extra $44,000 to the already struggling city's fiscal burden. Boyette asked on behalf of the city that the rate increase be denied.

Numerous citizens expressed their environmental concerns to the Utilities Commission. Many speakers at the hearing opposed the continued construction of the Cliffside Steam Station and the use of coal-fired energy. Dr. Lewis Patrie of the group Physicians for Social Responsibility said "many experts have concluded that we will be able to meet our future energy demands without building new coal-fired plants," and asked for the sake of public health and the environment that Cliffside construction be halted. Lee Taylor, a Marion attorney, asked "Is it mandated that because Duke has a monopoly, consumers are asked to shoulder the burden of fulfilling their rate of return?"

On Oct. 19th, the Utility Commission will hold a hearing in Raleigh, N.C., to make the final decision on whether or not to allow the increase.

The Debate Over Coal Continues

Continued from previous page

Nick Stocks conducted a tree sit that halted blasting at Massey Energy's Edwight mountaintop removal mine in Pettry Bottom, West Virginia. After six days of harassment by Massey security guards, Stocks came down; Steepleton followed later the same day after Massey guards began felling trees around her. Bail for each was set at $25,000.

During the same week, a boulder from a mountaintop removal site in Floyd County, Ky., crashed into an elderly deaf couple's home. Frasure Mining Company was fined $10,000.

On Sept. 9th, four men blocked the road to Massey Energy's Regional Headquarters. The protesters were arreseted, three above the age of 50, along with a journalist who was covering the event. The oldest, 81-year-old Ronald Micklem, is now organizing a four-day-long Senior Citizen's March starting in Charleston, W.Va., Oct. 8th to 12th.

Justice is Served

West Virginia State Police arrested Adam Pauley on Sept.18th, charging him with disorderly conduct, public intoxication and verbal assault in connection with a July 4th event on Kayford Mountain held by individuals working to end mountaintop removal coal mining. Pauley allegedly interrupted the event with others, yelling obscenities and death threats to attendees. He was released on $1,000 bail. No other details were known as of press time.

OTHER COAL-RELATED NEWS

Environmental Groups Request Decision Review

Earthjustice and the Appalachian Center for the Economy & the Environment filed a petition with the U.S. Supreme Court requesting a review of the recent Fourth Circuit court decision in a controversial mountaintop removal mining case. The lawsuit challenged the Corps' violation of the Clean Water Act by authorizing permits to fill 23 valleys and 13 miles of mountain streams in southern West Virginia without performing required assessments of the harm caused by burying the streams.

Environmentalists Oppose Pizarchik Nomination

Nominated for the Office of Surface Mining and Reclamation Enforcement, Joe Pizarchik, Director of the Bureau of Mining and Reclamation in the Pennsylvania Department of Environmental Protection, has ignored warnings about coal ash contamination, allowed valley fills of coal waste that have destroyed dozens of miles of streams and has allowed the proliferation of longwall mining, which has devastated homes and destroyed streams.

TVA Spends $43 Million in Roane County, Tenn.

The Tennessee Valley Authority is funding economic development projects at the site of last December's coal ash disaster, the largest in the country's history. The money will be spent on projects that do not directly relate to the spill such as improving the county school system and a public relations campaign to promote tourism in the area.

EPA to Issue New Water Discharge Rules by 2012

The rules limit toxic heavy metals that flow into US waterways from coal power plants' water discharge. Provisions in the Clean Air Act to reduce air pollutants from power plants have resulted in dirtier water produced by the coal plants.

Protecting our Public Lands

The Struggle For Conservation Continues

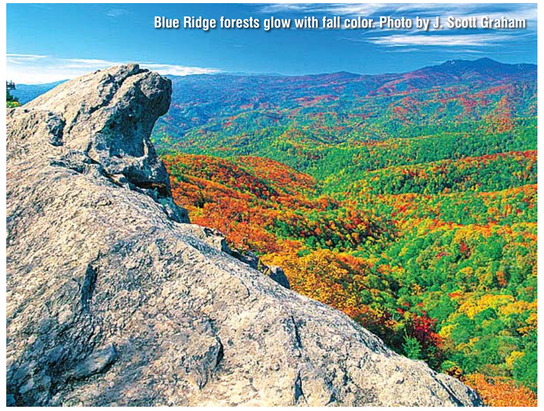
Parks and forests seem as American as apple pie and the flag today, so it might be surprising that there was ever any controversy. Yet the early advocates of parks and protected forests were often outraged at the condition of the land that they hoped to protect with a park system.

One of the most famous editors of his day, Horace Greeley, was outraged when the largest tree in Yosemite was cut down so that a circus could exhibit a ring of its bark.

He called on California to protect "the most beautiful trees on earth" and wrote that "...it is a comfort to know that the vandals who [cut down the tree] have … been heavy losers by their villainous speculation."

Greely was not unique. In ancient times, Romans passed laws protecting "sacred groves." And in 1916, the people who fought hardest for the National Park Service were those most outraged at the neglect and short-sighted use of such beautiful land.

It's no different today. We may celebrate the parks and public forests, but we need to recall that public-spirited women and men in government and in non-profit organizations are still fighting for conservation -- and for future generations.



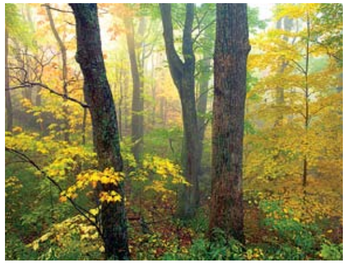
Blue Ridge forests glow with fall color. Photo by J. Scott Graham

Preserving The Last of The Old Growth Forests

By Maureen Halsema

As Randy Johnson treks through the rugged terrain of the Globe Forest's 300-year-old growth, he worries that the connection to this rare and dramatically beautiful ecosystem could soon be lost to logging. Johnson, a novelist and freelance writer who has been hiking the Globe since the 1970s, recalls the shock of seeing the "vast rippled realm" of the Pisgah National Forest marred by clear-cuts just a few decades ago.

"The patches of land that were like wounds on one of Appalachia's premier vistas, are slowly recovering, but for old growth forests, it will take more than a lifetime to revive their ecological vitality," Johnson said. Many of the oldest forests in Appalachia have been lost to timber harvests. "Only 4 percent of old growth forests in Southern Appalachia are left," said Chris Joyell, the communications director at Wild South.



Pisgah National Forest in North Carolina contains some of the last remaining old-growth forests on the East Coast. Photo by Jerry Greer

In June 2010, the US Forest Service plans to cut down 212 acres of the Globe in Pisgah National Forest. The main concern with the Globe project is that the northern section of the planned cutting area has old growth ranging from 130 to over 300 years old and is home to a wide range of rare plant and animal species.

"We believe the forest service should focus on repairing past problems, past legacies, before we create new problems, and continue a legacy of mismanagement," Ben Prater, associate director of Wild South, said. "While I am critical of Forest Service's methods, particularly in the Globe, I believe we are turning the corner with the Forest Service with restoration that we can develop methods that will benefit the forest, benefit the Globe, benefit the public, and benefit the wildlife."

The US Forest Service is in charge of the management of national forests. This division of the Department of Agriculture manages these public lands with the vision of multiple uses and sustained yield. The concept of multiple uses involves forest lands meeting the public's needs through a variety of means, including outdoor recreation, livestock grazing, timber, mining, fishing and watershed. Sustained yield means achieving and maintaining a high level output of the forest's renewable resources without impairing the land's productive value. This refers to resource extraction such as minerals and timber.

Throughout the 80s and 90s sections of the Globe Basin in Pisgah National Forest were subject to clear cutting. This method of forest management method has serious ecological impacts. Road and trail construction for logging areas has one of the most significant impacts on the ecosystem. If proper precautions are not followed, soil nutrients can be depleted and erosion can increase, particularly on the steep slopes of Appalachia where soils erode and wash into streams impacting the wildlife.

The Native Forest Council says that there are 380,000 miles of logging roads in national forests. These roads fragment natural wildlife habitats and cause erosions and landslides that flow into rivers and creeks, affecting

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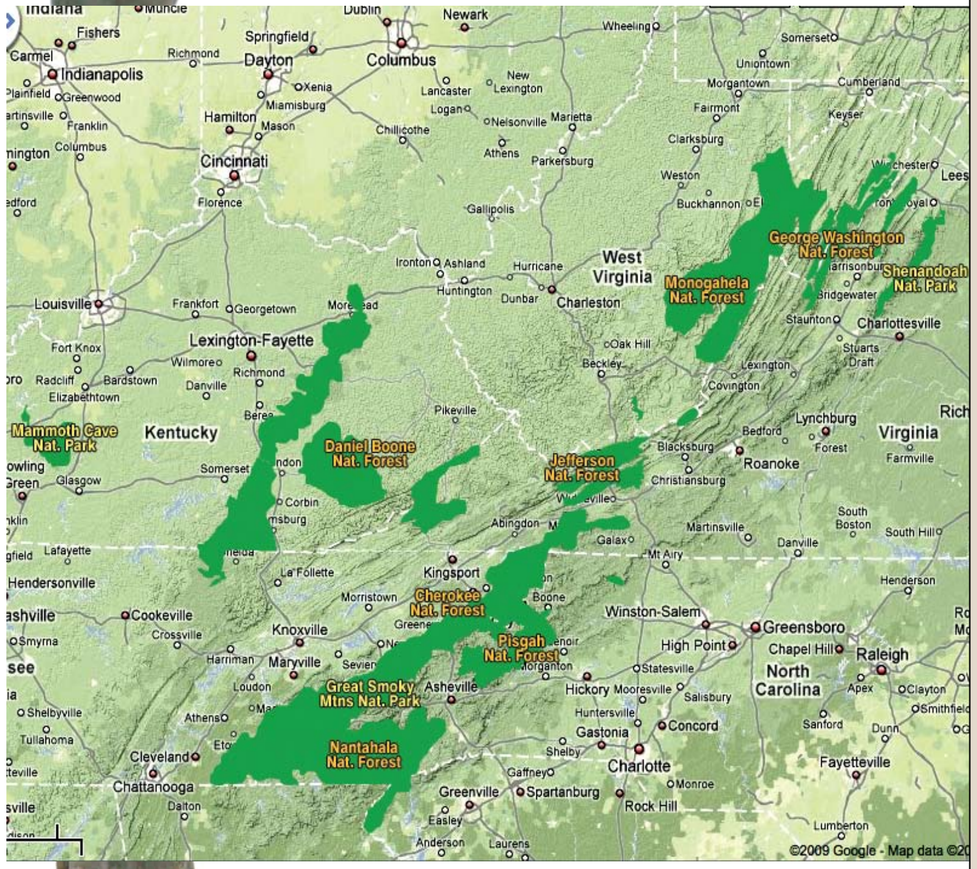

This map highlights where each of the national parks and national forests are located in central and southern Appalachia. The yellow text denotes a national park while the orange text designates a national forest.

Map may not be accurate to scale.

National Parks

National Forests

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REGULATION RUNDOWN

Public lands fall under a variety of different designations and regulations—enough to make anyone's head spin. Here's the rundown on public lands.

National Parks vs. National Forests

National parks and national forests are both federally managed, but national parks are managed by park rangers from the National Park Service, a unit of the Department of the Interior, while national forests are run by forest rangers of the U.S. Forest Service, a sector of the Department of Agriculture.

The conservation goals of national parks and national forests also differ. National parks are preserved with the intent to keep lands in an unimpaired state for the enjoyment and recreation of future generations. National forests are run with the vision of multiple uses, meaning they meet the nation's needs in a variety of means, beyond simply recreation. National forests, unlike national parks, permit activities such as logging, livestock grazing and mining.

Both national parks and national forests allow the use of motorized vehicles.

State Parks vs. State Forests

The state parks and forests are run similarly to the national parks and forests, except they are state managed. Regulations, such as whether hunting and logging are allowed, vary from state to state. The basic premise of conservation ideals is universal across most state boundaries.

Wilderness Areas

Wilderness areas can be found in both national parks and forests. For example, 40 percent of Shenandoah National Park has been designated a wilderness area, which means that this section of the park has the maximum protections of all public lands and is dedicated to research, education, recreation, and conservation. Regulations vary among wilderness areas, but there are some commonly shared restrictions. For example, motorized vehicles or equipment are prohibited within the wilderness area. Recreation is restricted to primitive and noninvasive activities, such as, hiking and canoeing, and sometimes hunting and fishing. Mining permits that were issued prior to the land's designation as a wilderness area are allowed to operate but are strictly regulated. Logging is only allowed by the wilderness managers or for permitted mining activities.

Preservation Politics

Millions of acres have been leased to oil and gas drilling as well as logging. Endangered species have been virtually ignored. Snowmobiles and four-wheeled all-terrain vehicles have been invited into national parklands. The Bush administration has left quite an environmental mess for the Obama administration to try and clean up. In March, President Obama took the first step, when he signed the Omnibus Public Land Management Act of 2009 into law, adding 2 million acres to the National Wilderness Preservation System in nine states, including Virginia and West Virginia.

Written and Compiled by Maureen Halsema

Species Invaders

By Maureen Halsema

Southern Appalachia is under attack. Half of the imperiled species in the region are at risk from invasive species. Some particularly damaging species include, the hemlock woolly adelgid, the emerald ash borer, the gypsy moth, the tree-of-heaven, and Japanese stilt grass.

The hemlock woolly adelgid threatens the majestic hemlock trees in the Smokies and Shenandoah by sucking the sap from the base of the trees' needles. Within a few years of infestation, these trees are often damaged and even killed. The loss of hemlock trees could have severe ramifications throughout the forest ecosystem, including affecting the Smokies' diverse salamander population. Park rangers are struggling to combat this invasive insect, originally from Asia, through a variety of means including introducing a natural predator, biocontrol beetles from British Columbia called the *Laricobius nigrinus* They have also used chemical controls, such as the Merit 75W formula designed for soil application. This type of control can eliminate a hemlock woolly adelgid tree infestation within two years. The chemical must be carefully monitored, however, to avoid introduction into nearby water resources.

The emerald ash borer's larvae pose an enormous threat to ash tree populations. The larvae eat the inner bark of the ash trees and interfere with the tree's ability to transport water and nutrients. The adults render are less devastating because they simply eat the foliage. This Asian native beetle has killed millions of ash trees across the United States and Canada. Insecticides and quarantines have been used to try to control the emerald ash borer population.

The gypsy moth caterpillar is an extremely invasive species that attacks the foliage millions of acres and hundred of species in the United States, particularly targeting oaks and aspen. Southern Appalachia is home to one of the highest concentrations of gypsy moths. Efforts to suppress gypsy moth population include, pesticides, natural predators, small mammals, birds, fungus species, and even viruses. Rangers have also been countering the effects by replanting the forest with trees that are less likely to be on the gypsy moth's menu.

The emerald ash borer's larvae pose an enormous threat to ash tree population, eating the inner bark. Adults, such as this one, are less devastating because they only eat the foliage. Photo by David Cappaert/USDA

Tree-of-heaven, an invasive species native to China, grows rapidly in a variety of conditions. It can survive in poor soil, thrives in the sun, but can sustain a population in the shade as well. In addition to growing ubiquitously wherever it takes up residence, the tree-of-heaven also produces an allelopathic chemical that prevents other plants from growing in its vicinity. This plant utilizes roads as a migration route. In order to control populations, rangers target large female fruit bearing trees in order to reduce seed distribution. Chemical controls are a controversial but somewhat effective means of population control.

Japanese stilt grass can also survive in a diverse range of habitats. It is most commonly found in shaded floodplains or in closed forest canopies with low lighting conditions, but it can also live in drier areas in direct sunlight. This plant poses a serious threat to the natural landscapes that it inhabits as it encroaches on land and nutrients displacing native species. Land managers try to combat their thriving and damaging populations through a variety of means. They attempt to manually remove these species, to mechanically remove them with a mower, or to apply herbicide treatments, such as Round Up.

Preserving The Last of The Old Growth Forests

Continued from page 14

salmon populations and other aquatic species sensitive to sedimentation.

Clear cutting has been a controversial forestry management technique for decades. In recent years, the US Forest Service has implemented different methods of cutting, such as two-age harvesting, which leaves a small percentage of the trees.

"Two-age harvest means we would go in and harvest 60 to 70 percent of trees in the cutting unit and leave the others there," said Terry Seyden, spokesman for the National Forests of North Carolina. In the Globe, US Forest Service plans to conduct a multi-stage project two-age harvest that will require 17 partial harvest units at about 11 acres each. "Two-age harvest is a relatively new method in the Appalachians, which has only been applied within a couple of decades. We are still, in my opinion, yet to uncover the lasting impacts," said Prater. "But we have been working with the Forest Service to examine opportunities to look at the two-aged cutting method and see if there are ways to improve it, not to expand timber extraction but to reduce the impact."

Many communities across Appalachia have used the legal system to fight back against timber production in their national forests. The Southern Environmental Law Center (SELC) filed an appeal of the timber sale in the Globe that subsequently denied. They asked the Forest Service to reevaluate their plan and to remove threats to old growth sections and to the viewsheds.

In response to the Globe project, communities in Watauga County, N.C., have also worked with the SELC's attorneys to draft a model bill that could be submitted to the Senate or the House of Representatives called the Grandfather National Scenic Area Act. The current proposal is designed to enhance the community, the forests, and the wildlife.

"It emphasizes the values of the scenic area and helps to define the lens for management for the Forest Service," Prater said. It calls for cessation of new road construction in the 25,500-acre scenic area and protects old growth forests from timber production. Cutting down trees would only be permitted for management purposes to protect the forest from wildfires, insects and disease. Mining would also be prohibited, but recreational activities such as hunting and fishing would be permitted.

"It costs no money to the tax payers and it protects the forests and local economies. That is why we think it such a unique and wonderful opportunity," Prater said.

THE GLOBAL GYM

By Maureen Halsema

Playing outside is great for your physical and fiscal health, and it does not require a membership fee or have piles of sweaty towels and long lines for the ellipticals. This worldwide "gym" offers thousands of miles of trails to hike, rocks to climb and waters to paddle.

Some of the greatest venues for outdoor recreation are the state and national parks. According to Outdoor Foundation's 2009 Outdoor Recreation Report, nature-related outdoor activities are on the rise. More people are participating in a range of easily accessible activities like backpacking, mountain biking, climbing, trail running, and adventure racing, while sports with higher price tags, such as downhill skiing, horseback riding, hunting, and fishing, tend be on a decline.

So no more excuses about how expensive the gym is - claim your membership today with the great outdoors!

Stimulus Package Benefits the Forests

The American Recovery and Reinvestment Act allocated $1.5 billion to the US Forest Service in order to create jobs and stimulate the nation's struggling economy, through the conservation and sustainable development of these lands. The act dedicates $500 million to Wildland Fire Management projects, including ecosystem restoration, research and rehabilitation, invasive species control, hazardous fuel reduction, grants, and support projects. In addition, $650 million is devoted to Capitol Improvement and Maintenance projects such as road maintenance, bridge and trail maintenance, watershed restoration, facilities improvement, remediation of abandoned mines, and support costs.

The following is a list of appropriations to Southern Appalachia for Capitol Improvement and Maintenance projects and Wildand Fire Management projects.

North Carolina	$32,591,000
West Virginia	$20,217,400
Kentucky	$10,146,700
Virginia	$5,081,000
Tennessee	$4,055,000

Celebrating Our National Treasures

By Maureen Halsema

A distinctive blue mist settles over the Great Smoky Mountains, winding roads criss-cross the rolling hills of southern Appalachia offering unmatched views from the Blue Ridge Parkway, and visions of autumn colors from Shenandoah's Skyline Drive take visitors' breath away.

Each of these Appalachian parks will be celebrating its 75th anniversary this year or next, and the new attention on the region's environmental assets reminds us that there are liabilities as well.

Ann Childress, chief ranger of interpretation at the Blue Ridge Parkway, cuts a ribbon to kick off the TRACK program. Photo by Theresa Lovelace

"Systemwide, we're facing an annual $600 million shortfall," said Joy Oakes of the National Parks Conservation Association. While there have been increases in parks budgets under the Obama administration, she said, "you can't effectively close up more than a decade's worth of maintenance backlogs and operations gaps with just one shot of money."

It would have been worse, but next year's budget has a six percent operations raise and a one-time stimulus package for infrastructure and roads that comes to nearly a billion dollars.

The declining infrastructure in the parks could be one factor in the declining per capita visits, as the parks reach their carrying capacity. Or there could be a broad generational shift away from outdoor recreation, as Richard Louv and others have asserted.

In an effort to counter this loss of visitation and generate interest in the parks, the Blue Ridge Parkway has launched an initiative to reconnect children and nature called, Kids in Parks.

"Over the summer we provided over 350 local kids with guided programs," said Carolyn Ward, project director for the Kids in Parks program. "This was done in partnership with the Asheville YMCA and Asheville City Parks. We have also launched the website at *Kidsinparks.com* where we track the kids progress, collect data to help assess the effectiveness of the program, and disseminate the prizes to the kids for participating in the program."

The first program under this initiative launched on Aug. 29 in Asheville. It is called TRACK: Trails, Ridges & Active, Caring Kids and it focuses on making parks and physical activity valuable and fun for today's youth. One aim of this project is to combat the significant rise in childhood obesity, which according to the Blue Ridge Parkway Foundation has more than tripled in North Carolina over the last two decades.

Preserving the biodiversity of the parks is a prime objective for its caretakers. The Great Smoky Mountains is home to over 10,000 different species of flora and fauna. It is a daunting task to ensure species and ecosystem conservation, particularly when many parks are understaffed and under funded. For example, the Blue Ridge Parkway has established over 250 inventory and monitoring plots to ensure that researchers can effectively monitor and ensure the growth of the park's species. Currently, however, the park can only afford to staff six of the over 20 biologists required to effectively carry out this task.

There are several initiatives that the parks are doing in conjunction with their anniversaries. For instance, Great Smoky Mountains National Park—in collaboration with the Friends of the Smokies—is creating a $4 million gift called "Trails Forever." The money will fund trail conservation and improvement throughout the park. As part of the Blue Ridge Parkway's 75th anniversary celebration, the Appalachian Regional Commission created the Gems of Appalachia Initiative, a $150,000 grant dedicated to enhancing communities in North Carolina and Virginia that border the Blue Ridge Parkways in order to support sustainable tourism and help to preserve the park.

National Parks By The Numbers

Number of parks 391
Park area..... 83 million acres
State with the most parks..... California
Smallest: Thaddeus Kosciuszko National Memorial, PA - 0.02 acres
Biggest: Wrangell-St. Elias National Park and Preserve, AK - 13.2 million acres
Visitors to the park(in millions)

	1934*	1958	1983	2008
Shenandoah	0.7	1.6	1.8	1.1
Smokey Mtns	0.4	3.1	8.4	9.0
Blue Ridge Pkwy	0.9	4.9	15.2	16.3

* Or closest year data available.

Recreational visits to the 391 national parks are up by about 12% over the past 25 years, but population increased 30% during the same time. Per capita use has actually declined from 1.1 visits per year to 0.95. This also correlates with increases in television and video game use, according to research W. Pergams and P. Zaradic. The only decline in real terms was tent camping, which dropped by seven percent, and RV camping, down 52%.

Source: US National Park Service http://www.nature.nps.gov/stats

Neighbors Play Role in Parkway's Prospects

Story by Sarah Vig

The Blue Ridge Parkway may be America's longest national park, measuring out at an impressive 469 miles in length, but it is also its narrowest—the average width of the park's right-of-way is only 400 feet on either side. In contrast, the viewshed extends more than one mile on either side, more than 13 times the actual protected area, meaning that changes occurring on the private property that abuts two-thirds of the Parkway's length, means changes to "America's Favorite Drive" as well.

"You might think [land viewed from the parkway] is protected, but often it is actually private and could change use at any time," says Rusty Painter, Director of Land Protection for the Conservation Trust for North Carolina. CTNC coordinates land protection efforts of the Parkway's scenic and natural corridor.

According to Gary Johnson, Chief Landscape Architect and Planner for the Parkway, it was not until the mid 1990s, as development pressures on adjacent lands increased, that the Parkway began working to preserve areas of high scenic value through state and federal conservation funding and cooperation with land trusts. In the last two decades, some 30,000 acres surrounding the parkway have been protected.

Certain areas in southwest Virginia (Roanoke, Franklin, Floyd, Patrick, Carroll and Grayson counties) and northwestern North Carolina (Alleghany, Wilkes, Ashe and Watauga counties) remain at high risk from development, a land use change that could be detrimental to park visitation, according to recent surveys conducted by the National Park Service. In these counties "development on adjacent lands is right in the visitor's face," Johnson says.

Sadly, land conservation along the parkway hit a major setback in February, when North Carolina Gov. Beverly Purdue, in an effort to ameliorate 2008's $3.2 billion budget shortfall, took $100 million from the Clean Water Management Trust Fund's 2008 budget—the entire budget for the year—and pulled $6 million from the Natural Heritage Fund and the Parks and Recreation Trust Fund, two other major sources of financing for land trusts in the state.

Painter calls the move a "huge blow," that is "devastating to conservation in the state." Due to the abrupt loss of funding, conservation projects across North Carolina that were already approved are now in purgatory.

The state legislature restored $50 million in CWMTF funding for the 2009-2010 and 2010-2011 fiscal years, but, according to Painter, most of the 2009 money will be used to fund last year's projects.

"It's going to take a long time to recover," Painter says, "Conservation [in North Carolina] is set back at least three years, potentially more"

Land trusts are being forced to wait to close on deals

Continued on page 21

The True Value of State Parks

Protecting our Public Lands

By Maureen Halsema

Today there are over 6,600 state parks covering 14 million acres across the nation. Each year, these parks draw millions of visitors across Appalachia. Tennessee State Parks alone average 25 million annual visitors. North Carolina has about 13.4 million visitors; West Virginia attracts about 7.5 million visitors each year; and Virginia brings in about 7 million annual visitors.

Parks and public lands are fundamental to state economies and to the parks' bordering communities. Ecotourism generates millions of dollars annually. For example, according to a study conducted by N.C. State University for the N.C. Division of Parks and Recreation, North Carolina's state parks generate $289 million in revenue in addition to $120 million in local resident's income. This study also found that investment in park programs and services leads to higher visitation and therefore higher state and local revenues. In addition, the increase in programs creates more jobs for the local communities.

State recreation areas are not only vital supplements to the economy, but they are also integral to physical and mental health. "Nature provides significant health benefits, one being stress reduction," said Michael Kirschman said in his article, "Know Your Audience, Speak Their Language, and Get the Support You Need," published in Legacy in July. "Since over 100 studies find that spending time in nature reduces stress, it can be argued nature preserves and their facilities have a positive impact on the health of our residents."

Chimney Rock in southwestern North Carolina was originally operated as a private park. Fears that the park would fall into the hands of private developers proved unfounded when the state aquired it in 2007. Photo by Jmturner

Yet funding is a significant issue for many state parks. "In West Virginia, 65 percent of funding is generated by the park," said Robert Beanblossom, district administrator for the Parks and Recreation section of the West Virginia Division of Natural Resources. "The other 35 percent comes from general revenue from the legislature and some is from lottery money." The current funds do not meet the parks' demands for projects such as maintaining infrastructure, managing invasive species, and developing park programs. Insufficient funding results in deterioration of parkland infrastructure and an inability to fulfill park objectives.

State parks are afforded many of the same legislative protections of the land, water, air, and endangered species as federally run national parks. For instance, in Kentucky, hunting, extraction or damaging biological resources, and logging are prohibited in state parks. While the main premise tends to be congruent from state to state, specific regulations can vary. For example, in some state parks hunting is permitted. In addition, some sections of state parks are designated nature preserves, which means they are provided the highest level of protection of all the state lands.

Parks are finding that their space is limited due to increasing development around the parks' borders, leaving little or in some cases no room for the preserved lands to expand its boundaries. In West Virginia, there have been no new parks added since 1989. "In many of our parks, we have reached our maximum carrying capacity that we can have without jeopardizing the resources of the park," Beanblossom said. As populations continue to grow, conserving these valuable natural lands will become an even more important task.

Great Smoggy Mountains?

Coal-fired Power Threatens to Further Deplete Air Quality

Story by Sarah Vig

In almost all respects, Great Smoky Mountains (GSM) National Park's list of attributes reads like a conservationist's wish list: largest old-growth forest east of the Mississippi, largest spruce fir pine forest, among the most biodiverse ecosystems in North America, most visited national park in America, salamander capital of the northern hemisphere, the list goes on.

But there's a black mark on that list: among the highest levels of air pollution of any national park in the U.S.

Though the park itself is distinctly un-industrial, the world has changed around it, and has not left it untouched.

The burning of fossil fuels such as coal and oil produces emissions of sulfur dioxide (SO2) and nitrogen oxides (NOx) that, when released into the atmosphere, convert into harmful secondary pollutants such as sulfates, nitrates, and ozone.

Bad Air Day

Ozone, or smog, is one of the Smokies' most serious air pollution issues. According to a National Parks Service (NPS) report, ozone concentrations have "exceeded standards to protect public health and vegetation."

High ozone levels can cause breathing problems among visitors, and tissue damage in developing lungs. In 2007, the most recent year for which monitoring data is available, the park experienced 19 "bad ozone days" on which park officials were required to ask sensitive groups such as children, asthmatics and the elderly to stay indoors. Since then, the EPA has lowered the number of parts per billion of ozone considered to be safe according to National Ambient Air Quality (NAAQ) standards, meaning even greater levels of non-attainment for GSM park.

Air pollutants are also affecting plant life. According to the NPS, 30 species of plant life in the park show visible damage from ozone pollution. SO2 and NOx pollution also produces acid rain, which contributes to tree death by removing nutrients from soil, releasing toxic aluminum, and weakening the trees' defense to disease or infestation.

Finally, air pollution levels have severely degraded visibility in the parks. On bad days, visitors see haze rather than the soft fog for which The Smokies are named. Haze has cut visibility in the park by an estimated 40 percent in the winter and 80 percent in the summer. NPS findings show that sulfate particles account for 84 percent of the haze on the worst days.

Coal-fired Controversy

Two new coal-fired power plants are currently under construction within 150 kilometers of the park: Duke Energy's 825 megawatt Cliffside Power Plant in Rutherford Co., N.C., and Dominion Electric's 668 megawatt Virginia City Hybrid Energy Center in Wise Co., Va.

Both have faced numerous challenges from citizens, environmental and conservation organizations, and federal land managers concerned about increased levels of hazardous emissions negatively impacting air quality, and human and ecological health.

In a victory for the U.S. Forest Service and the Virginia Dept. of Environmental Quality (DEQ), Dominion Electric pledged in late 2007 to cut SO2 emissions to half of the permitted level (4.1 tons per year) in response to complaints from the respective agencies.

Duke has said that its new plant will result in net reductions of SO2 emissions, but this claim has been met with skepticism by officials within federal agencies and environmental advocacy groups.

"The real-world effect of [Duke Energy's coal-fired power plant] by itself would be severe impacts upon air quality and air quality related values at Great Smoky Mountains National Park," wrote John Bunyak, chief of permit review for the NPS, in a letter to the NC DAQ board.

A hazy gaze of the Great Smoky Mountains. Photo by Robert Gubbins, istockphoto.com

A 2007 Supreme Court decision gives some credence to Bunyak's statement. The court found that the company had been improperly evaluating emissions at 8 plants in the Carolinas and failing to adopt the required BACT (Best Available Control Technology) updates. This decision may mean a reevaluation of Duke's emissions calculations, according to the NC DAQ, which may in turn mean a more stringent permit, though no measures to this effect have yet been enacted.

Blue Skies Ahead?

But, there is reason for optimism. State and federal laws passed within the last five to 10 years have forced emitters to progressively limit the release of dangerous air pollutants. According to Great Smoky Mountains' Air Resource Specialist Jim Renfro, "acid deposition, ozone, visibility and particulate matter [have been] improving over the past 10 years."

And, even a smog cloud has a silver lining. As a result of its non-attainment of ozone health standards, the park could be given the authority to limit new polluting industry from starting up.

Renfro gives this advice to citizens looking to help the park: "Use less electricity, drive less, [and] stay informed."

Grandfather Mountain Goes Green...er

Story by Julie Johnson

From the famous mile-high bridge, Grandfather Mountain's 3,300 acres spread across the landscape, their leafy canopy blanketing a wealth of biodiversity nestled in ridges and valleys. In addition to preserving this exceptional landscape, Grandfather Mountain, Inc., is committed to greening all of its man made attractions. From the solar-powered fudge shop to the shade grown, bird-friendly coffee, the park is embracing environmental sensitivity and mindful use of its rich environment.

This September, Grandfather received non-profit status. This is a move that will allow the park the opportunity to pursue large-scale greening of its entire facility. As a corporation, Grandfather Mountain, Inc.'s budget was limited to its commercial production. Its budget was determined by the number of visitors that entered the park and made purchases in the restaurant and gift shop. Even with this constraint, the corporation was able to successfully forge a partnership with The Nature Conservancy. Lands were sold to the Conservancy at half their market value price, with the stipulation that they never be developed. Now, as Grandfather Mountain Stewardship Foundation, the administrators will be able to seek grants and private donations.

Luke Appling, who plans and manages the green facilities at Grandfather, says "as a corporation, the huge projects we wanted to accomplish, like solar power and thermal heat for the museum and restaurant, were impossible." Now, though the program is in its infancy, the Grandfather Mountain Stewardship Foundation will be able to move towards these goals. The greening will not only make the park more efficient, but will also serve as an educational tool for the visiting public. Penn Dameron, who worked as the Executive Director of the Blue Ridge National Heritage Area, will lead the program.

The park has already started transitioning its infrastructure. In the fudge shop, wide ceiling skylights almost eliminate the need for electric lighting, even on partly cloudy days. Large rain collectors are positioned at each corner of the building, catching gutter run-off which is used to water the butterfly and hummingbird garden. A pump system on the solar panels heats water, which runs beneath the bamboo floor boards, providing radiant heat for the building in the winter and providing hot water for the taps.

The photovoltaic solar panel on the fudge shop roof is just one example of Grandfather Mountain's green infrastructure. Photo courtesy of Grandfather Mountain

The "Top Shop", under construction and slated for completion in 2010, is the newest building on Grandfather, and is placed at the foot of the mile-high bridge. Although the site's altitude makes greening difficult, the building will be as environmentally friendly as conditions permit. The construction was undertaken using LEED standards as loose guidelines. Grandfather's gusts, which at times can reach up to 100 mph, would rip solar panels off the roof like shingles in a hurricane, but aerodynamically curved skylights reduce the need for the compact florescent indoor lighting. It is constructed of "Grandfather Stone", quarried from the mountain in the 1950s and recycled from the demolition of the original mile-high shop. Top Shop will have sustainable bamboo flooring, radiant heating and compostable utensils in the food service area.

In conjunction with the statewide ban on plastic containers in landfills that will go into effect on Oct. 1st, Grandfather will begin to phase out plastic drink containers in the park. As the Grandfather Mountain Stewardship Foundation grows, they hope to expand their green infrastructure and use it as a tool to educate their many visitors.

Dolly Parton: Conserving American Icons

By Joe Tennis

"In my Tennesse mountain home, life's as peaceful as a baby's sight...crickets sing in fields nearby," sings Dolly Parton.

Parton has come back to her Tennessee mountain home to help celebrate the 75th anniversary of the founding of the Great Smoky Mountains National Park.

Parton, 63, who grew up in the foothills of the Smokies, is serving as the park's ambassador.

"I'm very honored about that whole thing," the entertainer said during a news conference earlier this year at her Dollywood theme park in Pigeon Forge, Tenn. "It's the most visited national park in the United States, and a lot of people are surprised when I say that."

Dolly Parton poses with Al Cecere, president of the American Eagle Foundation, and the eagle Challenger. Parton's theme park Dollywood houses an eagle sanctuary and rehabilitation center. Photo submitted

As part of the national park's anniversary, Parton has also penned songs for "Sha-Kon-O-Hey," a Dollywood musical production that tells the story of the Great Smoky Mountains along the Tennessee-North Carolina border.

"We have created this show to help celebrate it," Parton said. "That's the biggest production that we've had ... And all the money from the songs that I wrote for that musical goes to benefit the Smokies and all the different programs that they have."

For Parton, Dollywood recreates the days of growing up at nearby Sevierville and memories of the county fair, she said. "It kind of came out of a thing to where I just wanted to have a wonderful place for kids and families to have fun."

Parton was born in Sevierville, Tenn., and was the fourth of twelve children.

"From the first time that I remember remembering anything," Parton said, "I was very involved in the sounds of the birds and the crickets and all that stuff. And I actually started making up songs when I was about five years old."

Parton rose to fame in the late 1960s with hits like "Dumb Blonde" and "Just Someone I Used to Know." She has since become an international star of stage, screen and song, starring in movies such as"Steel Magnolias" and "9 to 5."

Through the years, still, she has returned to the Great Smokies. Dollywood, perched on the outskirts of the Great Smoky Mountains, opened in 1986 at the site of the former Silver Dollar City theme park, located in the busy commercial district of Pigeon Forge.

The park, along with its thrill rides and musical acts, also harbors the little-known Eagle Mountain Sanctuary, a living showcase of American bald eagles.

In Dollywood's Craftman's Valley, more than a dozen non-releasable eagles take flight in a 1.5 million-cubic-foot natural outdoor aviary that recreates the birds' natural habitat.

"We love having the sanctuary here at the park," Parton said during a telephone interview. "We also have a 'Birds of Prey' show here for the eagles and some of the birds that have been injured too much to fly."

Launched in 1990, Dollywood's complex includes the "Wings of America" Theatre; the neighboring Birds of Prey viewing facility; and an eagle breeding and rehabilitation facility, including an eagle medical clinic and nursery that is not open to the public.

"Over at the sanctuary, we raise new baby eagles from eggs," Parton said. "Then we turn them loose in the wild."

Dollywood's Eagle Mountain Sanctuary is a cooperative effort between the park and the American Eagle Foundation (AEF), a non-profit organization with permits from the U.S. Fish & Wildlife Service and the Tennessee Wildlife Resources Agency to possess, care for, exhibit, rehabilitate and breed birds of prey.

"We started this back when they were endangered - the bald eagle," Parton said. "And now they're plentiful again. And we're very excited that we were part of that at the beginning."

For Parton, helping to give a home to the eagles, even amid the crowded atmosphere of the park, is one way to help the environment.

"I hope we never destroy our mountains for any reason," Parton said. "I hope that we all get smart in time to salvage everything. It would be a shame to see the Appalachian Mountain or the Smokies, or any of that, the whole region, be sacrificed to do anything."

JUST THE FACTS

Eagle Mountain Sanctuary at Dollywood, 1020 Dollywood Lane, Pigeon Forge, Tenn., (865) 428-9488 or (800) 365-5996. www.dollywood.com

Neighbors Play Role in Parkway's Prospects

Continued from page 17

due to lost funding have to maintain hope for patient landowners, who might back out if they need to sell sooner.

Unfortunately, the loss of funding means missed opportunities for many conservancies in the states. The change in federal administration has seen an increase in federal money for conservation projects, but most federal programs require non-federal matching funds, which would usually be provided by the state.

"There are some great properties that will likely be lost forever," Painter says.

Johnson agrees. "The land protection strategy, the coalition of land trusts and willing sellers are in place," Johnson says. "Our greatest limitation is having funding available when opportunities to protect land occur."

To commemorate the Parkway's 75th anniversary, a coalition of conservation groups from North Carolina and Virginia have asked for $75 million from Congress over five years for the purchase of targeted lands or conservation easements.

In the meantime, land trusts will have to rely more heavily on easement donations, where landowners voluntarily agree to limit development and protect ecological values, and hope that state and federal tax incentives remain appealing to landowners.

Editorials

Our finest hours

When the history of the 21st century is written, the most important question will be how – or even whether -- we responded to the climate crisis.

As nations gather this fall in Copenhagen to consider a climate treaty, we Americans need to understand what is at stake.

First, it's now settled that the climate is changing due to human activity. From a pre-industrial level of 280 parts per million of CO2 equivalent in the atmosphere, we are now at 390 ppm, and the rate is accelerating.

Next, we have to ask what might that mean? In the past three years, scientists have been finding that climatic thresholds (or tipping points) are closer than we thought. If the earths temperature warms by more than 2 degrees Celsius, we can expect: that enormous quantities of methane trapped in the arctic tundra will start escaping; that ice will melt, lowering earth's reflectivity and increasing heat; and that oceans will become more acidic, decreasing their ability to absorb CO2.

Once we go over 2 degrees, which will probably happen at the level of 450 ppm, climate will shift quickly into different rainfall patterns and much higher sea levels.

This alarming information is difficult to absorb. Many Americans naturally question the idea of accelerating climate change. A few others, wrongly, reject the idea outright for reasons that have nothing to do with logic or science.

The most important question is whether we will exhibit adaptability and resilience in the face of catastrophe. Will we face tremendous odds bravely, with humility and humanity? Will we fight for the survival of civilization? Or will we numbly go down into the darkness, locked within gated communities and clawing for resources?

We must:

- *Educate ourselves about the science of climate change, and not let the real peril be masked. The US Global Change Research Program (www.globalchange.gov) is a good place to start. Science teachers will also appreciate Real Climate (www.realclimate.org).*
- *Begin phasing out fossil fuels, starting with mountaintop removal coal, and rapidly phase in renewable energy resources.*
- *Learn from leaders in the use of new energy technologies. For instance, Denmark builds the worlds best windmills and Germany is taking the lead in photovoltaic production. Europe is accelerating the renewable energy economy. We must not be left behind.*
- *Involve young people in developing conservation strategies and alternative non-fossil energy technologies. Encourage careers in environmental science, renewable electrical and civil engineering, and green business. We need to make massive investments in educating a workforce that can win this fight.*
- *Insist on appropriate political leadership from all sides of the political spectrum. These leaders will need to support an international climate treaty this December.*

In another dark time, British prime minister Winston Churchill once asked the impossible of his small population:

"Let us … brace ourselves to our duties, and so bear ourselves, that … (in) a thousand years, men will still say, 'This was their finest hour.'"

The climate crisis is so deep, and so important to our future, that if we approach it without wisdom, people won't have much to say in a thousand years.

However, with determination, and God's help, we might hope that these will be OUR finest hours.

"MADAM SPEAKER, THIS *ASTEROID ALARMISM* IS THE BIGGEST HOAX EVER!"

Letters to the editor

Appalachian Voice welcomes letters to the editor and comments on our website. Letters are subject to editing due to space limitations (letters can be read in full on our website). The views expressed in these letters, and in personal editor responses, are the opinions of the authors and are not necessarily the views of the organization Appalachian Voices. Write to editor@appvoices.org.

Well Contamination Nightmare

Dear Appalachian Voice:

Thank you for your extensive coverage of water quality in your most recent issue. It was excellent. I have been beating that drum ever since I discovered last April that the water supplying the house that I rent in Boone had e. coli in it. Through my landlord, I was paying the neighbor a specific amount each month for my water. I discovered only by accident – I obviously wasn't intended to find out – that the reason [they were] working on the well was contamination. The contamination helped to explain many strange health problems my wife and I had begun to experience from the day we moved into the house in October, 2008.

When my wife went to the neighbor to talk about it, she received no apology; discovered they had known about the potential contamination for at least several months – and it may have been a chronic problem extending back several years; and that the neighbors had taken steps to protect themselves by drinking bottled water and taking probiotics. The closest thing to an explanation offered for not informing us of the poisoning was that they "thought it was [college] students in the house."

My landlord acted swiftly and responsibly and the house is now on city water, but many important considerations remain – if not for me, for others on wells in the [region]. In conversations with Boone's health department at the time I discovered the contamination, I found out several important facts that local residents need to know.

(1) According to a rough estimate of one individual who tested our water, as many as 20% of wells in the area may be contaminated in some way.

(2) In the case of the e. coli, no source was traced. The contamination, however, could easily come from the local creek – from animals in the fields or through general runoff. This could happen with anybody's well.

(3) With individual wells and those serving up to about 15 houses (I can't remember the exact number now), there is no regulation of old wells for water quality.

(4) Individuals supplying others with water seem to have no statutory requirement to inform the people they are supplying either (a) of water quality with any regularity or (b) of contamination if discovered.

(5) Ultra-violet light treatment, although apparently effective, provides no means of ensuring that water quality remains safe if there is a power outage.

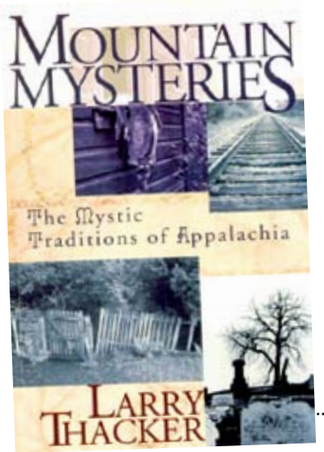
(6) In real estate transactions, purchasers should specify a test of current water quality.

Our neighbor said she was shocked to find e. coli in the water. "This is the kind of thing that happens in Third World countries," my wife reported after the conversation. I think we need to wake up and accept that it happens here and do something about it before we have a major health disaster on our hands.

Sincerely,
Ron Davis
Boone, N.C.

Mountain Mysteries: Bigfoot, UFOs, and the Downright Paranormal In Appalachia

By Joe Tennis



Larry Thacker, author of Mountain Mysteries, believes in ghosts.

In Larry Thacker's world, UFOs have touched down in the Appalachian Mountains. And, there's a mysterious Bigfoot creature roaming the dense woods of Tennessee.

Thacker—the director of student success and retention at Lincoln Memorial University in Harrogate, Tenn.—is the author of the recently released "Mountain Mysteries: The Mystic Traditions of Appalachia."

This 226-page paperback takes a look at death lore, psychics, the power of touch and faith, UFOs and ghostly legends in the mountains. One place Thacker has examined is the Ritchie House, a purportedly haunted residence in Ewing, Va.

Explaining how these stories are perpetuated and transformed over time, Thacker says. "People hear what they want to hear ... The human body likes things to be easy. And we like our history to be fairly simple. So we like to settle in on one or two things that we perceive to be accurate."

Thacker devotes several pages to the stories of the "Flintville Monster," Appalachia's version of Bigfoot, allegedly seen at Flintville, Tenn., near Chattanooga, and includes an interview with Mary Green, "The Bigfoot Lady," of Overton County, Tenn.

"The reputation of this creature, most generically recognized in the United States as Bigfoot, is deeply rooted in our country's superstitions and folklore," Thacker says. "I believe that such a creature is, in fact, seen all over the world."

But, he pondered, the sightings of a "Bigfoot" in the Appalachians might also be akin to seeing a ghost.

"Every family that you talk to has a family ghost story—or their own," Thacker says. "I think the story behind the story is what I get the most into. What were the people doing? What kind of emotional state were they in? And how did the story go 20 years earlier?"

Thacker says he believes in ghosts.

"Some form of them, in my opinion, must exist," he says. "The ghost phenomenon is too persistent in the world's history not to have some reality in there."

A fascination with folklore took root in Thacker when he was a child.

"I was particularly entertained by paranormal topics - everything I could find," he says. "That childhood fascination apparently never went away."

Soon after graduating Lincoln Memorial University in 1991, Thacker began working on the material that became "Mountain Mysteries."

Along the way, he says he was "learning who I was by approaching these topics as legitimate history, rather than sporadic entertainment."

The book's material - with chapter titles including "Appalachian Mystery, History and Heritage" - was collected through interviews and research.

"It's about approaching mystery and legend and paranormal studies as a new form of history," Thacker says. "It's legitimizing those things as a new form of history."

"Mountain Mysteries" is available through The Overmountain Press. Call (800) 992-2691 or visit www.overmountainpress.com.

Joe Tennis, of Bristol, Va., is the author of SULLIVAN COUNTY, TENNESSEE: Images of America (Arcadia Publishing).

Letters to the editor

Continued from previous page

Costs of Mountaintop Removal Outweigh Benefits

To the Editor,

It has amazed me that West Virginians keeps shooting themselves in the foot & then wondering why it hurts. This is a state that voted for Bush twice & went big time for McCain. Your July letter to the editor from the people who can't see the forest for the trees explains it all. Their "jobs depend on mountaintop removal" letter blames everyone but the right people for their troubles.

Yes, George Bush was an enemy of the environment. To name just a few of his actions; he reneged on promises to regulate coal fired plants, pulled out of Kyoto, lied about & changed scientific data on global warming & fuel efficiency standards. Additionally he gutted sections of the Clean Air & Clean Water Acts, reduced enforcement by the EPA, and defunded programs to clean up toxic waste. And yes, he approved mountain top removal for coal mining.

Do these people really believe destroying WV environment is preferable to developing new technologies to save & enhance that environment? Yes, it takes time & no we can't wait any longer to act. If we do not act we will still be dependent in future on sources of foreign energy from people who hate us. We need to be a good example to the world. We can't preach if we don't "walk the walk." We are not a third world country, at least not yet.

West Virginia also depends on tourism for income. Who wants to come to a totally flat, devastated state & spend their money.

The repercussions of mountaintop destruction far outweigh the short term benefits. Homes & lands destroyed, horrendous & expensive health problems, & poisoned water, plus air pollution. In most areas of the US, water is the new gold, but a lot of West Virginians don't seem to care about their water.

I guess also many West Virginians don't care about their health either. Since Scott & Heather suggest working towards finding a cure for cancer as an alternative option to fighting mountaintop removal, I suggest opposition to removal does just that. There would be a lot less cancer if the environment was cleaner.

Finally, I would rather be standing in an unemployment line for a time, as hard as that is, & be healthy; than be sick & exhausted with cancer. I can state that with authority since I have stood in those unemployment lines but am now too sick & exhausted to do so.

Sandra Gordon
149 Carriage Hill Lane
York, PA 17406

Mountain Lover

To the Editor,

After reading your Editorial page in the Appalachian Voice of June-July 2009. I have to admit that I agree with Ann Robinson of Tazewell County. I too feel that the best place for the windmills is in the central part of this nation.

I have traveled across this country many times. The only areas I've seen these windmills is on barren land. In areas that no one would want to live.

I do not feel that it is necessary to put them on the tops of the Appalachian, Smokies or Blue Ridge Mountains. Keep them in the Central part of this country where they will not destroy Mother natures beauty.

I realize that I am only John Doe public, and that we don't have the money that the power companies do. But let's face facts. They have destroyed the beauty of West Virgina with strip mining. Why let continue to destroy the beauty of our mountains with Windmills.

These mountains are our charge. The Lord gave them to us so we could enjoy their beauty, not destroy them.

A Mountain Lover,
Beverly Brown of North Carolina

Reconsider Animal Agriculture

Dear Editor,

This is in response to an article that appeared in [*The Appalachian Voice*] some time ago about the Heifer Project. Please re-consider your support of this "charity." Encouraging animal agriculture is no favor to people, the planet, or the environment. Animal agriculture is not sustainable, it is cruel to the animals, and consumption of animal flesh and secretions is detrimental to human health. In fact, according to the China Study, meat and dairy are the #1 cause of most types of cancer. Please see this group for what they are - a front for the meat and dairy industries, and please end your support of them.

Thank you,
Cindy McDaniel
cindygoldenhair@poetworld.net

INSIDE APPALACHIAN VOICES

Bloodshed and Coercion in the Coalfields: From Colombia to Appalachia

Part 2 of a 3 part series

Story by Sandra Diaz

As I wrote in the last issue, I traveled along to the coalfields of northern Colombia in South America through the Witness for Peace program. Part of our trip was spent talking to Sintramienegetica union leaders, who represent Drummond Coal workers, based out of Birmingham, Alabama.

Valmore Lorcano
Presidente - SINTRAMIENERGETICA
13/04/1964 - 12/03/2001

Victor Hugo Orcasita Amaya
Presidente - SINTRAMIENERGETICA
11/11/1964 - 12/03/2001

Gustavo Soler Mora
Presidente - SINTRAMIENERGETICA
17/03/1962 - 06/10/2001

Threats towards unions often take a violent turn in the country of Columbia, where three leaders in a miners union, above, were executed within a six-month period. Right, a union t-shirt.

Drummond Coal has been accused of extreme tactics to undermine the Colombian union's power. In 2001, two Sintramienegetica presidents and a vice president were assassinated. In March of that year, paramilitaries stopped a company bus which was carrying mine workers home from the La Loma mine at the end of a shift. Union president Valmore Locarno and Vice President Victor Orcasita were pulled off the bus. Locarno was shot in the head, in visible sight of the other miners; Orcasita's tortured body was found a few days later. Six months later, Gustavo Soler—who had replaced Locarno as union president—was also executed by gunshot to the head. As Alberto Solana, another union leader explained, "When you become a union leader, you become a military target."

In 2007, the International Labor Rights Fund (ILRF) and the United Steelworkers of America filed a lawsuit against Drummond Coal in the U.S. District Court in Alabama on behalf of Sintramienergetica and the surviving family members of the three murdered union leaders. The suit alleged that Drummond had payed hundreds of thousand of dollars to Colombian right-wing paramilitaries. The jury in Alabama found the coal enterprise "not liable" in the deaths.

Unfortunately, murder is a commonly used tactic to squelch union activity. Each year, more union activists are killed in Colombia than in all other countries combined. Carlos Castaño, former head of the United Self-Defense Forces (AUC) paramilitary umbrella group was quoted as saying, "We kill trade unionists because they interfere with people working."

The situation in Colombia is reminiscent of the constant power struggles seen in the Appalachian coalfields. In Appalachia's early history—from the Battle of Blair Mountain to the Harlan County War in Kentucky—bloodshed seemed to be the prerequisite for unionization. While these battles led to strong union ethics for many years, we have once again seen the power of the unions diminish. Less than 25 percent of miners in the central and southern Appalachian coalfields are currently unionized.

Don Blankenship, CEO of Massey Energy—one of the largest coal mining companies in central Appalachia—has led the movement against unionization. He is so proudly anti-union that he keeps a television with a bullet hole in it from the time someone shot through his office window during a union strike in 1985. He likens living in a capitalist society to a jungle. "It's survival of the fittest," Blankenship is quoted as saying. "In the long term it's going to be the most productive people who benefit."

Blankenship has the run of the land in West Virginia; while it is not to the extent that paramilitaries in Colombia have, the impact is the same—keeping unions and their workers from realizing their potential for organizing.

Both cases demonstrate the harsh reality that unless people are willing to stand up for themselves and each other, it is easy for corporations to take advantage of their workers.

Welcome to Our New Washington, D.C. Office!

Appalachian Voices and the Alliance for Appalachia have opened a legislative headquarters in Washington D.C. to better serve Appalachia's growing corps of citizen lobbyists and accommodate our growing work there. Located on the corner of 8th and D Street NE on Capitol Hill, the office is a 10-minute walk from the US Capitol, and set up with internet, color printing, and refrigeration capabilities. AV and the Alliance are currently seeking donated items such as shelves, desks, and original artwork or literature to outfit our new D.C. home. Call the D.C. office at (202) 669-3670 for more information, or stop on by!

Lenny Kohm Wins Outstanding Conservationist Award

By the AV Staff

On Friday, October 2, 2009, Lenny Kohm was awarded the Outstanding Conservationist Activist Award from Wild South's Roosevelt-Ashe Society. A choice award given only when the committee deems someone worthy, the title is bestowed on individuals who "[deserve] recognition for their outstanding contribution to environmental conservation."

In our way of looking at things, Lenny Kohm is the epitome of what a conservationist should be. He is a normal individual who was transformed and driven to work beyond exhaustion to save and protect the places that have shaken him to his core. After venturing to the Alaskan wilderness on a photography assignment, Lenny became so transfixed by the Arctic and its people, he could be seen wandering the tundra at at all hours, both night and day, taking photographs. His seemingly endless tundra ramblings earned him the name "little man that never sleeps" from the local Gwich'in Indian tribe.

Realizing that this last great frontier was threatened by devastating exploitation from oil companies, Lenny took to the road and traveled the United States for twenty years, advocating for the protection of the Arctic National Wildlife Refuge. Often traveling with members of the Gwich'in Indian Nation, Lenny and his companions would present to anyone that would listen. They spoke at churches, Rotary Clubs, auditoriums and living rooms. All in the name of protecting a truly pristine wilderness region and a unique native culture.

Lenny's ardent activism took a new direction when he moved to the mountains of North Carolina and learned about the devastating practice of mountaintop removal coal mining in central and southern Appalachia. In the heart of his "retirement years," he became Campaign Director for Appalachian Voices and began to apply the same techniques to this issue as he did to the Arctic—inspiring the local citizens to organize and engage their own voices in the political process to protect their land and communities.

A belief of Lenny's is that those directly affected by an issue are the best storytellers, and the results prove him right. In the thirty years Lenny has been working on the Arctic Refuge, the area has not been drilled. In the seven years he has worked on mountaintop removal coal mining, he has helped secure more than 150 original co-sponsors of the Clean Water Protection Act and a number of co-sponsors on the new Senate companion, the Appalachia Restoration Act.

The list of Lenny's accomplishments in environmental activism are long, but he prefers to stay out of the spotlight, so you'd never know he was even involved. Lenny's personality and organizing philosophy revolve around helping other people use their voice rather than elevating his own. He has inspired hundreds of citizens to become activists.

Lenny Kohm speaks to citizen lobbyists at the 2009 End Mountaintop Removal Week in Washington's legislative reception last March.

One of the exemplary examples of his Lenny's influence on others is Savannah Walters. After seeing his presentation, in which he stated that the amount of oil the Arctic would provide could be conserved if Americans simply kept their tires properly inflated, Savannah phoned Lenny. She had an idea of getting other kids to help check tire pressure on cars parked at a local mall. Lenny encouraged Savannah Walters to pursue the idea. Savannah now leads the Pump 'Em Up Project, a program that has gotten hundreds of young people across the US to educate adults to "Pump 'Em Up"to help save the Arctic Refuge.

Lenny has spoken with presidents, broken bread with coal miners, and played drums in a basement garage with Jimi Hendrix. He is both an honorary chief of the G'wichin Indians and the inspiration for an annual Lennystock rafting celebration. The staff of Appalachian Voices affectionately calls him 'Yoda' because his experiences are vast and his knowledge is like a deep pool, reflecting under the surface.

Congratulations, Lenny. You have our admiration, love, and respect.

Wild South is an environmental organization based in Asheville, N.C. that is dedicated to protecting the southeast's native ecosystems. Their Roosevelt-Ashe Society's Conservation Awards are an annual tradition of honoring the men, women, and local businesses whose contributions to outstanding environmental stewardship distinguish them as role models for the community. The giving society is named for President Theodore Roosevelt and Mr. William Willard Ashe, the first forester employed by the state of North Carolina. The awards issuance process was overseen by a committee independent of Wild South. For more information, visit www.wildsouth.org

AV Helps Citizen Lobbying Step Up A Notch

After citizens took the month of August to have in-district lobby meetings during the Congressional recess, legislators and citizen lobbyists from the Appalachian coalfields returned to Capitol Hill in September to continue the fight to end mountaintop removal coal mining. It was an exciting month for the federal legislative push to stop mountaintop removal. The Clean Water Protection Act (H.R. 1310) picked up a few more cosponsors, including Mel Watt of North Carolina. The tally now stands at 156 co-sponsors.

Appalachian Voices and other member groups of the Alliance for Appalachia hosted a large lobby week with dozens of coalfield residents and other attendees from as far away as Los Angeles, CA. Needless to say, the event was an enormous success. Participants met with key legislators including Senator Kay Hagan and Congressman John Yarmuth, while meeting with the legislative staff of dozens of critical members of the United States House and Senate.

In a historic meeting, citizens from all four mountaintop removal states got together with all the agencies responsible for regulating mountaintop removal in the same room. This meeting at the White House complex included staff from President Obama's Council on Environmental Quality, the Environmental Protection Agency, the Army Corps of Engineers, and the Office of Surface Mining, Reclamation, and Enforcement.

Promoting From Within...

Sandra Diaz, the National Field Coordinator for our mountaintop removal campaign, has been promoted to Director of Development and Communications, where she will now be working on our communications strategy to our funders and members alike. Stephanie Pistello, who was working on contract with our legislative team, will be stepping into a permanent position as the National Field Coordinator, where she will work with our national network of activists working to end mountaintop removal coal mining. Congratulations to both Sandra and Stephanie!

Naturalist's Notebook

Rare Species of Appalachia

By Maureen Halsema

Southern Appalachia is rich in biological diversity, including some truly unique creatures, critters and downright creepy crawlies.

The unusual and elusive hellbender salamander. Photo by Jeff Humphries, hellbender.org

Sasquatch of the Salamanders

Cryptic, territorial, and elusive are traits inherent to the hellbender salamander, a unique and formidable-looking creature with almost prehistoric appeal. The Eastern hellbender is the largest aquatic salamander in the United States, affectionately known as the snot otter, devil dog, and Allegheny alligator. The giant amphibian averages from 12 to 15 inches, but has been known to grow over two feet in length and hides reclusively during the day beneath flat rocks in shallow, clean, and quick moving streams.

"If a fisherman catches a hellbender they'll kill them," said Jesse Pope, chief naturalist at Grandfather Mountain. "They think the hellbenders are eating the fish, but that's just not true." Rarely seen due to its nocturnal nature and secluded lifestyle, the hellbender has a voracious appetite, but not for fish. They hunt for crayfish, toads, and salamanders among other tasty morsels. The hellbender is exclusively found in the mountains and surrounding local areas in the eastern United States, with their largest concentration in western North Carolina.

These unique creatures are very important indicators of water quality, due to their sensitivity to certain factors such as pollution and siltation. The International Union for Conservation of Nature (IUCN) lists them as near threatened and they are close to qualifying for vulnerable status. In addition to the threat of misled fishermen, the hellbenders face habitat loss and degradation. "Hellbenders have to have good water quality and relatively low sediments in the water," Pope said. "Sediments come from development, impacting streams, road run off, and storm water run off."

Studies are being conducted all over western North Carolina, searching for the presence of hellbenders in approximately 3,000 streams. "The concern is that a lot of the hellbenders we're finding are big hellbenders, 15 to 20 years old," Pope said. "We're not finding the little ones. This raises concern. Are they remnant populations that are there? Are they no longer reproducing? Are these the last hellbenders that are going to be in those streams?"

The Itsy-Bitsy-Spider

The spruce fir moss spider is the world's smallest tarantula. It exclusively inhabits elevations exceeding 5,000 feet and is only found at Grandfather Mountain, Mount Mitchell and Roan Mountain State Park. The tiny tarantula can take up to three years to reach full growth of 0.1 inches to 0.15 inches! "They are a little smaller than a tick but bigger than a flea," said Pope. They are a variety of colors from yellow-brown to a reddish brown.

The spruce fir moss spider has been on the endangered species list since 1995. One of the main reasons that these spiders are endangered is that they require a unique habitat—damp moss mats growing on rock outcrops in well-shaded forests, typically populated with fir trees. "They are very species specific to a certain type of moss that grows up there," Pope said. The little tarantula creates tube-shaped webs in moss mats that grow on rocks underneath spruce and Fraser fir trees of the southern Appalachian Mountains.

These conditions have become increasingly rare, as many Fraser fir trees have been wiped out by the balsam woolly adelgid, an invasive species from Europe. Without the cover of the Fraser fir trees, the spiders' moss mats, which are essential to their habitat, are subject to climate changes and are frequently drying out.

Global warming is another threat to the Fraser fir, because they need at least a month of cold winter for their seeds to germinate. Finally, acid deposition from fog and rime ice is a serious threat to the spiders' habitat. "We've found some of the rime ice pH measurements up here to be almost as acidic as battery acid. We've had it down to about 2.8," Pope said. The limited range of this species puts it at serious risk when subjected to any disturbance of its habitat.

When Rodents Fly

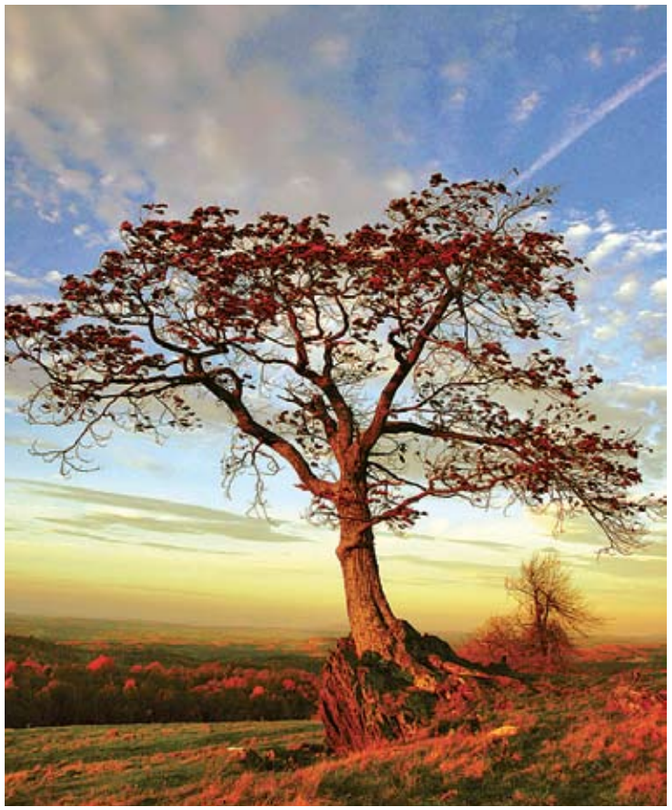
It's a bird, it's a plane, it's a Carolina northern flying squirrel! This nocturnal rodent has notably large eyes and a long flattened tail that makes up 80 percent of its 10 to 12 inch body length. The term flying squirrel is a bit misleading; this airborne squirrel actually glides rather than flies using patagia, which is a large fold of skin that stretches from its front legs to the hind legs. The Carolina northern flying squirrel is only found in western North Carolina, eastern Tennessee, and southwestern Virginia. The U.S. Fish & Wildlife Service added it to the Endangered Species List in 1985.

They generally live in elevation areas that exceed 4,500 feet, and prefer the spruce fir forest transition zones that border northern hardwood forests. These conditions are ideal for nesting in tree cavities and feeding on fungi, lichens, catkins, insects, and tree sap—just a few items that make up the northern flying squirrel's omnivorous diet.

Their habitats, however, are threatened by the balsam woolly adelgid, which targets adult fir trees. Destructive forestry practices such as logging also threaten their habitats. Another threat to the northern flying squirrel's survival is the risk of infection by a parasitic nematode, called *Strongyloides*, which is carried by the southern flying squirrel.

In order to help ensure the survival of these delightful flying critters, conservation of high elevation coniferous and northern hardwood forests is essential.

Naturalists tag a Carolina northern flying squirrel at Grandfather Mountain. Photo by Jesse Pope, Grandfather Mountain



"This shot was taken on a brisk late October day at Saddle Gap on the Blue Ridge Parkway in Floyd County, Virginia. The sky was spectacular, changing every second. That tree was 400 yards away when I spotted it from the top of the open meadow, and I ran (dodging cow patties) to capture the image I imagined; the lone windswept oak, standing against the elements, making a living from the rocky soil, dropping its leaves even as I watched through the viewfinder." -- Photographer Fred First

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GET INVOLVED environmental & cultural events in the region

To be included in our listing of environmental and cultural events for the Appalachian areas of VA, WVa, NC, TN and KY, please email voice@appvoices.org. Keep in mind that our publication is bi-monthly. Deadline for the next issue will be Monday, July 20, 2009 at 5pm.

Daniel Boone Festival

October 5-10

The Daniel Boone Festival has been held in Barbourville, Ky., since 1948. This year's festivities will include a parade and a feast to commemorate the signing of the Cane Treaty between the Native American's and citizens of Barbourville.

Senior Citizens March To End Mountaintop Removal

October 8-12

A Senior Citizens March to protest mountain top removal will depart from the state capital in Charleston, W.Va., on Thursday, October 8 and end at the gates of Mammoth mountaintop removal mining site in Kanawha County on Monday October 12. The 25-mile march, organized by 81-year-old veteran Roland Micklem, will include speaking events each evening.

LEAF Fest

October 15-18

Black Mountain, N.C., will host the autumn Lake Eden Arts Festival. This bi-annual festival celebrates music and the arts and and is for the first time this year supported by a National Endowment for the Arts grant. Performers include The Squirrel Nut Zippers, Cowboy Junkies, Arrested Development and Zap Mama. The festival will feature contra, zydeco and African dance sessions, a fiddle contest, kid village and poetry slam. Tickets are available at www.theleaf.org or 828-686-8742

N.C. Utilities Commission Rate Hike Hearing

October 19

The final Duke Energy rate increase hearing will be held by the North Carolina Utilities Commission in Raleigh, N.C. The hearing will take place at 1:00 pm in hearing room 2115 of the Dobbs building, 430 N Salisbury St. The Commission's final decision on the rate hikes will be announced.

Appalachia Powershift

October 23-25

The KY Student Environmental Coalition and the WV Youth Action League will sponsor one of the 11 regional summits of Power Shift '09 at Marshall University in Huntington, W.Va. The event is intended to gather young voters together to exercise their political power for clean energy and justice in every community. Visit appalachia.powershift09.org for details.

Photography Workshop

October 23-26

At the peak of leaf season, the Great Smoky Mountain Institute at Tremont will host a photography workshop led by Wilard Clay. Field lessons and lectures will combine natural history interpretation with photographic technique. Register online at: www.gsmit.org/fallphoto

SplitRail Eco-Fair

October 24

The SplitRail Eco-Fair in Floyd, Va., will celebrate rural living. Live music will be amplified by solar power, and locally grown produce and sustainable products will be offered. Information on sustainable agriculture, business and forestry will available, and admission is free.

Writer's Retreat

November 5-8

The Aurora Project will hold a Writer's Retreat in Cathedral State Park of Aurora, W.Va. The state's poet laureate, Irene McKinney, will participate in the November retreat and is scheduled to give a reading. To register call 304-735-3620 or visit www.auroraproject.org

Southern Appalachian Man and the Biosphere Conference

November 17-19

Southern Appalachian Man and the Biosphere (SAMAB) will hold its 2009 fall conference at the Crowne Plaza Hotel in Asheville, N.C. The focus will be "Climate Change in the Southern Appalachians." Key note speaker Sam Pearsall of the Environmental Defense Fund will speak on the possibility of adapting to climate disruption in the region. SAMAB's goal is to "foster a harmonious relationship between people and the Southern Appalachian environment."