Our Changing Climate

➡ Debunking the Top Ten Myths
➡ Predicting ecological and economic fallout
➡ What does this mean for our food security?

ALSO INSIDE: Summer Environmental Camps for Kids • 2nd Annual Riverfest • Meet the Scarlet Tanager
A Note From the Executive Director

Dear Readers,

This year, we have been witness to a trifecta of worst-case scenarios in the world of dirty energy. The tragedy at the Upper Big Branch coal mine killing 29 miners, the disastrous BP oil spill in the Gulf and now Japan’s tragic tsunami made even worse by a lingering nuclear threat, all make it clear that continuing to rely on fossil fuels and nuclear energy is just plain dangerous. Transitioning to a cleaner, safer, alternative energy economy is within our reach. We have the technology; we just need the will of the people to demand change and begin to chip away at the entrenched political and financial roots that keep these outdated and perilous energy sources alive.

The dangers of coal may not be as immediately obvious as a nuclear meltdown, but a recent Harvard study shows undeniable risks to the health of communities and the environment. Right now, energy is in on the minds of people everywhere. It is time to be emphatic with leaders, letting them know that we are not willing to risk our lives and environment in the name of dangerous energy any longer. Together, we have the power to usher in a green and peaceful energy future. Let’s do it!

willa

INSIDE THIS ISSUE

SPECIAL SECTION: Climate Change

In this special 8-page section, we look at myths and truths surrounding the greatest dilemma the human race will face this century.

About the cover

Scott Holaling, a two-time winner of the Appalachian Mountain Photography Competition People’s Choice award (2008 & 2010) took this photo of a small salamander warming in the sun at Great Smoky Mountains National Park. A landscape and nature photographer, Scott primarily works in the western North Carolina mountains. See his work online at LightOfTheWild.com.

Correction: In our February issue, “The Women of Appalachia,” we inadvertently misspelled the middle name of Ann Pickel Harris, one of our Heroic Environmentalists. We regret the error.


Printed on 100% recycled newsprint, cover 40% recycled paper, all soy-based inks
By Parker Stevens, 
Festival Coordinator

Start your summer with a splash at the 2nd annual Appalachian Voices’ RiverFest and membership gathering, slated for June 4 in beautiful Valle Crucis, N.C. on the banks of the Watauga River.

At this year’s RiverFest, folks will have the opportunity to try their hand at making Japanese-style fish prints, learn more about the tiny critters in our river, eat delicious BBQ and even meet one of the event’s mascots—a real hellbender.

Festival goers will also be able to participate in hands-on demonstrations and talk to water quality experts like Appalachian Voices’ own Riverkeeper, Donna Lisenby.

There will also be an opportunity to float or paddle down the river (provided the water level is adequate).

And in case you don’t see one on your own, the N.C. Wildlife Commission will have a live hellbender you can meet while learning more about their struggle to survive. To read more about these prehistoric, giant salamanders, see our sidebar on page 4.

There will be face painting, nature walks, piñatas, and a cake walk too! And back by popular demand—a no-hands watermelon eating contest! Trust me folks, it’s harder than it sounds, but it’s certainly fun (and entertaining to watch).

This year, RiverFest will also serve as Appalachian Voices’ annual membership gathering. If you are a member of Appalachian Voices, bring your ideas, questions, or suggestions. You will have the opportunity to meet with members of our staff and board and learn more about the important work we are doing in the region. If you are not yet a member and would like to participate in the membership meeting portion of the event, you can join Appalachian Voices by completing the form on page 26 or by visiting us online at AppVoices.org.

GYOTAKU-HUH?

Interested in arts & crafts? Try your hand at Gyotaku fish prints! The name for this Japanese style of art comes from the word for fish (gyo) and rubbing or impression (taku). Use paint and rubber fish molds to make colorful prints of fish while learning about the adaptations they have made in order to live in different environments.

CREATURES WITH THREE TAILS!

Visit the Watauga River Partners to learn all about bugs and insects in the river. Use microscopes and magnifying glasses to get up close and personal with a mayfly larva—an insect that

Continued on next page
Riverfest 2011

Continued from previous page

does indeed have three tails. Once you can identify them, head down to the river to see if you can find some for yourself.

Be a Raindrop

Ever wondered what it’s like to be a raindrop? At RiverFest, kids can become a water droplet and make their way through a water cycle obstacle course, from a rain cloud all the way to a kitchen sink.

A Foot-Stompin’ Good Time

Live blue grass music will be provided by Bill Adams (Charlottesville, Va.) and the band Upright & Breathin’ (Boone, N.C.). If you are musically inclined, bring an instrument and join your fellow musicians at the Pickin’ Parlor.

Even after this issue goes to print, we will continue to add more great activities, demonstrations and partnerships. Visit AppVoices.org/RiverFest to get the latest scoop on RiverFest 2011. See you there!

Hellbender: 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 or Appalachian alligator. This giant amphibian averages from 12 to 15 inches long, but has been known to grow over two feet in length. They generally hide during the day beneath flat rocks in shallow, clean and quick moving streams. Hellbenders can live for more than 30 years in ideal conditions.

Though often killed by fishermen for fear they are eating fish, these toothless giants hunt primarily for crayfish, toads and salamanders.

The hellbender is exclusively found in the mountains and surrounding local areas in the eastern United States, with the largest concentration in western North Carolina.

Hellbenders can live up to 30 years, however they are currently threatened due to habitat loss in their fragile territories. Photo by Lori A. Williams, North Carolina Wildlife Resources Commission

These unique creatures are very important indicators of water quality. As adults they breathe entirely through their skin, which makes them extremely sensitive to pollution and siltation.

Hellbender populations have dramatically declined in the last 25 years. 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 fishermen, the hellbenders are at risk of habitat loss and degradation.

At RiverFest, you can visit the N.C. Wildlife Resources Commission and meet Rocky, a live hellbender—an opportunity you don’t want to miss.

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Watauga Democrat 264-6397 News
Local hikers enjoy the Blue Ridge Mountains. Photo courtesy Appalachian Voices.

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Patagonia Footwear and Mast General Store will donate $10 to Appalachian Voices for each pair of Patagonia shoes you purchase from April 30 thru May 15, 2011.
Be an advocate for the places you love: support local conservation efforts.
**ASU In the Running for Solar Decathlon**

By Jesse Wood

Students at Appalachian State University are striving to be shining examples of sustainability by building the best model home on the planet.

ASU’s Solar Homestead team is one of 20 universities from around the globe competing in this year’s U.S. Department of Energy’s Solar Decathlon, the world’s largest green building competition.

Schools in the competition have seven months to construct a 1,000 square foot home, which will be on display next fall at the National Mall in Washington D.C. The bi-annual event attracted over 400,000 people two years ago.

There is no prize for the winner—only bragging rights—although each of the 20 schools selected for the competition receive, over the course of the project, a $100,000 grant from the U.S. Department of Energy. Because schools are not able to use the grant for building materials, ASU is using the money to fund research and pay participating students.

Appropriate Technology and Building Science students wrote the original proposal, but participating students come from a variety of disciplines, such as physics, business, communications, graphic design and computer programming. Over 150 ASU students are involved in the project.

In 2009, ASU began designing their solar model, and in March they started full-scale construction of the homestead. The team’s design concept is based on the ingenuity and independence of the original Appalachian settlers.

“We took this traditional homesteading idea, where you have this self sufficient collection of buildings working together—spring house, smoke house, chicken coup and your living quarters,” said David Lee, ASU graduate student and Solar Homestead communications manager. “We took that idea and related it to solar power and technology and modern sustainable living.”

ASU’s Solar Homestead consists of a core house with a separate 120 square-foot guest/office quarters. There is also an outdoor deck covered with a canopy that holds the majority of the solar panels.

**New Grant to Study Pines**

Virginia Tech was recently awarded part of a $20 million dollar National Institute of Food and Agriculture grant to study the effects of climate change on southern pine forests. With this grant, researchers will study changes and adaptation of trees like the loblolly and develop a plan to improve the health and productivity for southern pines. This tree species covers an area of 34 million acres and sequesters 12 billion metric tons of carbon each year.

**Affording Hope through Environmental Dance**

Human experience with the environment is intertwined with passion and responsibility. Leaps and Bounds is a multi-layered art performance that joins themes of faith, ecology and the economy, compelling the audience to reflect on the relationship that humans have with the earth. This one-woman performance, presented by artist Teyvn East, incorporates storytelling, song, poetry, prayer, movement and music.

Leaps and Bounds, a presentation of Virginia Tech’s Affording Hope project, will be presented at the Watauga High School in Boone N.C., on April 20 and at Jubilee in Asheville, N.C., on April 22. Visit affordinghopeproject.org.

**Hydrofracking Diesel Injections at it again**

New inquiries discovered the continued use of diesel fuel injections in hydraulic fracturing, or “fracking,” - a drilling process which pumps large volumes of water into the earth to loosen up shale rock and release natural gas. The use of diesel in hydrofracking was not considered a violation of the Safe Drinking Water Act until last year, yet the EPA has not enforced monitoring standards since that change. Visit http://nyti.ms/dJPB6g.
Environmental News From Around the Region

The first question everyone should ask folks in Appalachia this April is, “What are you doing for the 41st annual Earth Day?”

The answer is a little more complicated, because of the array of events taking place throughout the region. From a recycling contest to dumpster diving, the fairs and exhibitions taking place to celebrate Earth Day will keep your social life hopping all week.

Story by Kaley Bellanti

**The Clinch Coalition and University of Virginia, Wise, Va.**

April 20-21: The Clinch Coalition is teaming up with the University of Virginia (UVA) Wise Student Environmental Club to host two major events at UVA’s campus in Wise, Va. On April 20, they will be featuring the documentary FRESH, a celebration of people across America who are reinventing our food system. This will be preceded by several short Appalshop films. On April 21, Camille Kingsolver, co-author of the book, Animal, Vegetable, Miracle, will discuss her family’s journey away from the industrial-food pipeline to a rural life in which they vowed to produce and buy only local food for an entire year. Visit clinchcoalition.net

**Appalachian State University, Sanford Mall, Boone, N.C.**

April 20, 11am-3pm: Local farmers will present their produce and share their wisdom on sustainability and locally grown food. Attendees can also participate in “The Swap,” where students bring unwanted items to exchange. ASU Food Services will also host a local food meal from 11-2 pm.

Visit act.appstate.edu/earthday.

**2011 Piedmont Earth Day Fair, Winston-Salem, N.C.**

April 16, 10am-5pm: The Triad’s largest Earth Day event was designed to promote environmental stewardship through practical life applications. With over 100 exhibits, kids scavenger hunts, games and live music. Don’t miss out on the fun! Visit peanc.org/earth-day-fair

**Charlotte Green and Clean, Central Piedmont Community College, Charlotte, N.C.**

April 11, 11am-4pm: This green festival will offer individuals, families and businesses the opportunity to learn about home efficiency, green living, solar photovoltaic, green remodeling and building and green careers. Come experience a variety of kids activities, local food and music. Visit festival.charlottecleanandgreen.com.

**Asheville Earth Day, Pack Square Park, Asheville, N.C.**

April 21, Spend the day in beautiful Asheville learning how to keep your community clean and moving toward a sustainable future while listening to live music from bands, The Lee Boys and Toubab Krewe. Visit avlearthday.org.

**Earth Day Celebration, E.P. “Tom” Sawyer State Park in Louisville, Ky.**

April 22, 10am-6pm: Celebrate Earth Day at the park! Join in hikes to vernal pond, a dumpster dive, a live animal demonstration, a park clean up and a geocaching demonstration. Call 502-429-7270.

**Earth Day at VMNH**

April 15: School groups are invited to the Virginia Museum of Natural History’s 3rd annual Earth Day at VMNH event. Visiting classes will participate in hands-on programs, activities, music and movies to learn about conservation, recycling, biodiversity, ecology, and the beauty of nature. Programs will be SOL correlated to Virginia standards. Contact Discover@vmnh.virginia.gov

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**Jobs Project Installs 46 Panel Solar System in W.Va.**

By Jeff Deal

This winter, a crew of electricians and construction workers—several with experience working in coal mines—worked to bring the green economy and solar electricity to a town long known as the “Heart of the Billion Dollar Coalfield.” On February 3, a team from West Virginia’s Mountain View Solar and Wind installed 46 high-performance solar electric panels on the roof of a Williamson W.Va., doctor’s office. The 11-kilowatt (kW) solar electric system will sit atop the roof of the Williamson Family Care Center, on a building owned by Dr. Dino Beckett.

The installation highlighted Williamson’s “Solar Week,” a four-day green jobs training and education event convened by town mayor Darrin McCormick, The JOBS Project, representatives from the region’s community and technical colleges, electricians, contractors, business owners and residents, as well as community-developed renewable energy pioneer, The Appalachian Institute for Renewable Energy (AIRE).

The installation used solar electric panels made by the American employees of SolarWorld, the largest and most experienced U.S. manufacturer of crystalline silicon solar electric technology.

“With this project, local electricians are learning job skills while receiving $45 an hour,” said Eric Mathis, executive director of The JOBS Project, a non-profit organization working to bring sustainable job options to West Virginia.

“An area that has up to this point summarily rejected all things not coal opens up its arms, eyes and skies to a broader view of energy and its role in it. Plus, the groundwork is laid for hundreds of projects like it. That’s significant.”

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**Largest backpacking event in the world... ...in the friendliest town on the trail!**

**APPALACHIAN TRAIL DAYS**

**May 13-15**

**DAMASCUS, VIRGINIA**

**www.TrailDays.us**
Summer is just around the corner and that means it’s time for summer camps! Environmental programs can help your child become a stronger individual, make lifelong friends and foster independence while learning about the outdoors. We compiled this list of environmental summer camps to help you get your kids outside and learning.

**Green River Preserve**
Location: Blue Ridge Mountains, N.C.
Age: 7-17; Session: one week
Cost: $1000-2000

Green River Preserve is a co-ed overnight camp located on 3,400 acres of wildlife preserve in the Blue Ridge Mountains of North Carolina. Campers will crawl into caves and waterfalls, snorkel in rivers and creeks, track wildlife, hike and explore archaeological sites.

[greenriverpreserve.org](http://greenriverpreserve.org)

**Sea Turtle Camp**
Location: Wilmington, N.C.
Age: 13-17; Session: 11 days
Cost: up to $2000

Sea Turtle Camp is an 11-day adventure where campers work alongside the Karen Beasley Sea Turtle Hospital staff to care for sea turtles. Campers will learn about and help with coastal conservation, spending 20 community service hours working on eco-service projects that will teach them about salt marsh and wetland sustainability while directly improving the health of the North Carolina coast.

[seaturtlecamp.com](http://seaturtlecamp.com)

**UNC Wilmington Marine Quest**
Location: Wilmington, N.C.
Age: 5-17; Session: one week
Cost: $800

Campers will have the opportunity to learn about marine life off the coast of North Carolina. Younger campers will spend their time exploring beaches and marshes, while the older campers will participate in ocean research cruises to learn about marine technology.

[uncw.edu/dp/cs/marinequest/](http://uncw.edu/dp/cs/marinequest/)

**Piedmont Wildlife Center**
Location: Durham, N.C.
Age: 4-18; Session: daily from 9-3
Cost: $200-225/week

The Piedmont Wildlife Center’s summer camp program specializes in different themes each week. A few of this summer’s special camps include: “Way of the Cougar,” “Survival in the Natural World” and Swamp Crawler.

[kidsprogramspwc.wordpress.com/camps/](http://kidsprogramspwc.wordpress.com/camps/)

**EARTH Camps**
Location: Deep Gap, N.C.
Age: 8-17; Session: one week
Cost: $500-1400

EARTH Camps are held at Buffalo Cove, a beautiful 200-acre camp located at the headwaters of the Yadkin River in the Blue Ridge Mountains.

**Gwynn Valley Camp**
Location: Near Brevard, N.C.
Age: 5-13; Sessions: 1 to 4 weeks
Cost: Varies

Experience farm life and learn about your connection with the land. Campers will milk cows and goats, pick vegetables, feed animals, gather eggs and more. Campers will also spend time hiking, swimming and riding horses.

[gwynnvalley.com](http://gwynnvalley.com)

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**Camp Katsuah**
Location: Raleigh, N.C.
Age: 7-15; Session: one week
Cost: $500

Master the basics of permaculture, a blend of natural science, native traditions, technology and ecological awareness. Campers will learn about natural paint, solar ovens, earthen ovens, gardening and more.

828.664.0067

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**Blue Jay Point County Park 4-H Camp**
Location: Wake County, N.C.
Age: 8-14; Session: one week, mid-June
Cost: $400

Campers have the opportunity to learn outdoors skills through hands-on activities such as horseback riding, archery, arts and crafts, ropes courses and more.

[wakegov.com/humanservices/family/4youth/4hcamp.htm](http://wakegov.com/humanservices/family/4youth/4hcamp.htm)

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828.664.0067
Ocean Adventure Camp
Location: Topsail Island, N.C.
Ages: 5-12; Sessions: Day or Week
Cost: $190/week

Campers learn to conserve the coast by spending time in the ocean, beaches and marshes. Camp themes include “Mysteries of the Deep,” “Shark Days” and “Squirmy, Slimy and Spineless.”
ematopsail.webs.com

4-H Camp Explore
Location: Greenville, Tenn.
Ages: grades K-8; Session: one week
Cost: $250

Campers learn about the environment and explore the natural surroundings doing stream analysis, forest ecology, lake exploration, canoeing, woodworking, leather crafts, archery and other activities. Open statewide to the first 180 students that make a reservation.
clydeaustin4hcenter.com/CampExplore/

Camp Idyllwild
Location: Duck River, Tenn.
Age: 5-7; Session: two weeks
Cost: $850 plus

Children have the opportunity to work with farm animals at Camp Idyllwild in Duck River, Tennessee.
campidyllwild.com

Camp Hidden Meadows
Location: Bartow, W.Va.
Age: 7-16; Session: one week
Cost: $800

Camp Hidden Meadows provides campers with activities such as white water rafting, horseback riding, camping, hiking, woodworking, ice cream making and more. They also offer week-long horseback riding and rock climbing camps.
camphiddenmeadows.com

Mountain Adventures Summer Camp
Location: Spruce Mountain, W.Va.
Age: 12-17; Session: one week
Cost: $850 plus

This camp defines adventure; campers will participate in activities that develop self-confidence while educating them about their natural surroundings. Activities include white water rafting, rock climbing, caving and more.
mountain.org/sumercamp

Rust Nature Sanctuary Summer Camp
Location: Leesburg, Va.
Age: 4-17; Session: one week
Cost: Varies

As part of the Audubon Naturalist Society Summer Camps program, this camp is located on over 40 acres of nature reserve. Campers will have fun with games, hikes, songs and other camp traditions in a natural setting. A counselor training program is available for campers over 13.
audubonnaturalist.org/default.asp?page=547

Wilderness Adventure at Eagle Landing
Location: New Castle, Va.
Age: 8-17; Sessions: 1-2 weeks
Cost: $895-1795

At this outdoor adventure program, campers will indulge in rock climbing, kayaking, canoeing, mountain biking, rappelling, caving, ropes courses and more.
wilderness-adventure.com/

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campidyllwild.com

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mountain.org/sumercamp

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wilderness-adventure.com/

4-H Camps
Location: West Kentucky, North Central, J.M. Feltner and Lake Cumberland, Ky.
Age: 9-14; Session: one week
Cost: Varies

Children will learn about the environment doing activities such as fishing, hiking, swimming, riflery, archery, canoeing and more.
campidyllwild.com

Bear Creek Aquatic Camp
Location: Kentucky Lake, Ky.
Age: 10-18; Sessions: 1-2 weeks
Cost: $300 plus

Bear Creek Aquatic Camp is a Girl Scout camp located on Kentucky Lake, featuring over 200 acres of waterfront property and 2 miles of shoreline. Campers learn sailing, windsurfing, archery, horseback riding, hiking and more.
kygirlscoutcamps.org/bear_creek_aquatic.htm

Camp Crooked Creek
Location: Louisville, Ky.
Age: 11-17; Session: one week
Cost: Varies

Camp Crooked Creek is a Boy Scout camp where campers spend time learning about the wilderness and participate in activities such as hiking, fishing and swimming and have the opportunity to earn merit badges.
lhcbsa.org/59/BoyScoutSummerCamp

Wilderness Adventure at Eagle Landing in Virginia is full of adventures like the ropes courses pictured here. wilderness-adventure.com
Hiking the Highlands

Kentucky’s Pine Mountain Trail

By Sam Adams

The first impression when entering the southern end of the Highland Section of the Pine Mountain Trail is that it is going to be an easy walk.

The trail enters the forest where U.S. 119 crests Kentucky’s second-highest mountain near Whitesburg, and abruptly starts downhill. The word “trail” seems to be a misnomer; It’s more like a dirt road – wide and easy to walk on. Trees throw dappled shadows on the route, promising cooling shade, and the verdant slopes foretell water at every bend.

First impressions can certainly be deceiving.

The Pine Mountain Trail is a linear state park that will eventually run 110 miles along the top of the longest mountain range in Kentucky. It begins at the Breaks of the Big Sandy River, where the Russell Fork passes through Pine Mountain, and is complete to U.S. 119, where hikers can temporarily pick up Little Shepherd Trail, a one-lane paved state road, for another 38 miles. When finished, the PMT will parallel the Little Shepherd, then continue to the Middleboro on the Tennessee border. Traveling this route one finds miles of wild splendor, complete with black bear, elk, deer, rattlesnakes and a view that is unmatched in Kentucky.

The Pine Mountain Trail has been designated as the route for the Great Eastern Trail through Kentucky.

The highland section is allegedly easier to hike from the south, but make no mistake: it is only easy for hikers already conditioned to the mountains.

Once the trail passes the Flamingo Shelter, not even a half-mile from the southern end, it drops perhaps another 200 feet, then starts back up abruptly. The next several miles take the hiker on a dizzying roller coaster of exposed cliff line, deep woods and mountain bogs.

The Highland Section doesn’t waste time showing hikers why Pine Mountain is famous for its views. Just after passing the sign-in box, hikers find themselves on a narrow spine of limestone and treated to a one-of-a-kind view to the north. Only a tenth of a mile from the box, Eagle Arch, a natural sandstone arch comes into view below the trail.

After passing Eagle Arch, there are some mountain bogs along the trail, but no drinkable water to speak of during the hot months. A heart-pumping mile and a half past the arch, hikers get a brief respite from the heat, as they must shed their packs to pass through the Lemon Squeezer, a narrow split in the rocks.

From there, it’s only another mile to the Southern end of the High Rock Loop Trail, where day hikers descend to Bad Branch Falls State Nature Preserve and a pickup point, but anyone who does not continue from this point to High Rock is missing the figurative high point of the trail.

The trail dips considerably to reach the High Rock Loop trail. Hikers can refill canteens from the stream there before beginning the steep ascent over boulders and along sheer cliffs. In high summer it is an unforgiving sweatbox, with the heat reflected off bare limestone ridges.

But High Rock makes it all worthwhile.

Although it is several hundred feet below the actual summit, High Rock provides an unparalleled view of Whitesburg and the surrounding area. Even Mars Rock, a few hundred feet to the north, doesn’t offer as fine a vista.

Beyond High Rock, hikers plunge back into the woods. Along this section, hikers must be careful to watch for blazes and keep a close eye on the map, as well as the ground. Since this is the most difficult point to reach from both ends, it is also the most difficult to maintain and the least traveled.

From this point, hikers will have several opportunities to leave the trail, but those who continue will climb another 300 feet to Mayking Knob, Kentucky’s second-highest point, then start the jagged descent to U.S. 23. Hikers get their second chance at water, and their first designated camp site at the Adena Shelter, eight miles from U.S. 23 and the end of the section.

Maps can be downloaded from www.pinemountaintrail.com

Whitesburg lies nestled into the foothills below High Rock, the main overlook along the Highland Section of the Pine Mountain Trail. Photo by Sam Adams
Textile plant Acme McCrary is out to prove that big industries can make a big impact. The company’s Pritchard Street facility in Asheboro, N.C., is home to one of the country’s largest solar thermal systems in the country. At the end of 2010, the plant transferred from the age-old steam boiler to solar thermal energy to heat the water they use to produce the 110,000 dozen pairs of hosiery per week.

Traditionally, the textile industry relies heavily on fossil fuels for energy. Industry giant, Acme McCrary, who employs 600, is setting new standards for manufacturing plants nationwide.

“We are pleased to be a leader in sustainability and to be a responsible corporate citizen for our community, our employees and our customers,” said Bill Redding, CEO of the corporation. Redding credits his employees on the company’s Green Committee as a major initiator of the project.

“There was a need from the customers and the company to make the corporation more sustainable,” explains Bruce Williams, an Acme McCrary employee and member of the Green Committee. “The idea of solar power came up, and we went with it.”

The Green Committee started researching the prospect of solar energy and found that solar thermal would be the most efficient resource.

Acme McCrary credits one of its major customers, Walmart, as an inspiration, due to environmental standards that Walmart has imposed on its vendors. “Walmart’s sustainability requirements drove us to form our own,” Williams stated. Acme McCrary joined Walmart’s Sustainable Council in 2010.

“A successful merchandise lineup hangs on the right products... and the right partner. Coincidentally, we offer both.” - Acme McCrary

Acme McCrary found FLS Energy based in Asheville, N.C. The company specializes in solar energy systems that provide hot water and electricity to their clients. FLS Energy designed and installed the solar thermal system at no cost. In turn, the company is selling the thermal energy back to Acme McCrary at a lower price than the cost of traditional fossil fuel energy.

The system includes 200 solar panels, manufactured by Alternate Energy Technologies based in Jacksonville, Fla. The panels capture heat from sunlight to generate 10,000 gallons of hot water a day at 180°F. Annually, the implementation of solar thermal ultimately will reduce the corporation’s carbon emissions by 249,000 pounds and cut energy costs by more than $20,000.

The project was partly supported by a grant under the American Recovery and Reinvestment Act.

On January 18th, Acme McCrary held a press conference introducing the solar thermal system to the public. North Carolina State Senator Kay Hagan was present for the ceremony and praised Acme McCrary’s leadership and initiative. “The installation of these next-generation solar panels represents a partnership between our state’s textile sector and emerging clean energy sector,” Hagan stated.

The partnership between Acme McCrary and FLS Energy provides an essential link for the future of the textile industry; proving big corporations can make a positive impact on the environment.

Coal Industry Backlash Against Clean Water Act Continues

By Sandra Diaz

Much to the ire of the coal industry, the Environmental Protection Agency has taken unprecedented steps to mitigate coal-related pollution on Appalachian waterways over the past two years. The coal industry is fighting back, and leveraging the new, anti-regulatory political climate in order to pass bills that weaken federal clean water laws.

The industry loudly opposed the EPA’s January decision to veto the controversial Spruce No. 1 mine permit, despite the fact that mine owner Arch Coal had earlier refused a compromise. The agreement the EPA initially offered the company would have allowed the company to obtain the majority of the minable coal at the site, while cutting the amount of streams buried in half. In addition to saving Arch millions in mitigation and reclamation costs, the changes would have cost only $.55/ton more.

Shortly after the EPA’s announcement, industry allies in Congress struck back with legislation to limit the agency’s permit veto authority granted to them under Section 404(c) of the Clean Water Act. Senator Joe Manchin (D-WV) introduced the EPA Fair Play Act (S. 272), which would disallow the EPA to veto any permit after the Army Corps permit has already been issued; Rep. Dave McKinley (R-WV) introduced a companion bill in the House.

The Mining Jobs Protection Act, introduced by Kentucky senators Mitch McConnell and Rand Paul (S. 468) and by Hal Rogers of Kentucky and Shelley Moore Capito of West Virginia in the House (H.R. 960), is similar to the legislation introduced by Manchin. The legislation would drastically reduce the time frame in which the EPA can assess the water quality impacts of valley fills for mountaintop removal coal mining operations and other “dredge and fill” permits from six months to 60 days.

Some members of Congress utilized the platform of the 2011 federal budget bill (H.R. 1), attaching amendments to the bill which would deny the EPA ability to direct funds toward enforcement of current and proposed regulations on mountaintop removal mining, coal ash storage, emissions from coal-fired power plants and other environmental safeguards. Although the amendments had direct impact on the EPA’s use of funds, they ostensibly had no affect on reducing the overall budget.

The budget bill passed in the House with the majority of the pro-coal provisions and is now stalled in the Senate while Democrats and Republicans struggle to compromise.

States legislators are also jumping in to remove clean water protections. Efforts to dilute the Clean Water Act in Virginia were successful when allies of the coal industry passed legislation to limit the ability of state regulators to use water quality testing for evaluation and enforcement of surface coal mining permits. The bill also repeals the authority of the citizen State Water Control Board to administer certain Clean Water Act permits.

In Kentucky, the Senate’s Natural Resources and Energy committee unanimously approved Senate Joint Resolution 99, which would declare Kentucky a “sanctuary state” for the coal industry, free from EPA’s “over-reaching regulatory power,” while the Natural Resources and Environment Committee in the House unanimously passed House Bill 421, which would exempt coal mined and used exclusively in Kentucky from the federal Clean Water Act. With the state’s legislative sessions now closed, lawmakers will have to reintroduce the provisions in order to achieve passage.

NEWSBITES FROM COAL COUNTRY

CITIZEN POLICYMAKERS GO TO WEEK IN WASHINGTON: Over 100 citizens from across the country will assemble in Washington, D.C., April 2 - 6 to meet with Congress about the Clean Water Protection Act and the Appalachia Restoration Act. For more information on this event, visit http://ilovemountains.org/ww.

FAMILIES WITH POISONED Wells GET THEIR DAY IN COURT: Trial begins August 1 for 700 plus community members seeking compensation for exposure to toxic metals and chemicals in coal waste (slurry) allegedly introduced into ground water by Massey Energy Co. near Rawl, W. Va.

KEEPING THE “MOUNTAIN” IN BLAIR MOUNTAIN: On March 9, mountain lovers from across the nation will begin a five-day march that will end in a rally from Marmet, W.Va., to Blair Mountain in an effort to stop the commencement of mountaintop removal coal mining operations on the historic peak. More at www.friendsofblairmountain.org

WV UNDERGROUND COAL SLURRY BAN BILL GUTTED: A bill to ban underground coal slurry injections was voted on for the 1st time in the West Virginia Legislature. Although sponsored by Senate leadership, the Alternative Coal Slurry Disposal Act was unfortunately gutted of key provisions in both the House and Senate and did not make it out of the Finance committees.

KENTUCKY MOUNTAIN LOVERS “PORCH SIT-IN” WITH THE GOVERNOR: On Feb. 14, 2011, fourteen peaceful protesters emerged from the office of Kentucky Gov. Steve Beshear after a four-day sit-in; they were met by an exuberant crowd of 1,000 supporters on the steps of the state Capitol for the 4th Annual I Loves Mountains Day.

EPA TO ARCH COAL: The Clean Water Act - Obey or Pay: Arch Coal agreed to pay a $4 million civil penalty for alleged violations of the Clean Water Act in the states of West Virginia and Kentucky.

TENNESSEE: MTR FREE OR NOT TO BE?: Community members in Tennessee, seeking to end mountaintop removal coal mining in the state, defeated a bill that appeared designed to delay decisive action on permanently ending mountaintop removal coal mining within the state.

STOP LIMITING CONDUCTIVITY LIMITS: The EPA’s Environmental Quality Board for W.Va., sidelong with arguments by the Sierra Club, ordered the WV Department of Environmental Protection to regulate conductivity pollution from coal mining operations within the state.
Coal Dust Control Measures Rejected in Virginia

By Jamie Goodman

Residents in southwest Virginia expressed disappointment this March when a petition to the State Air Pollution Control Board to require mandatory control and monitoring regulations for coal dust from nearby mines and transport trucks was denied.

The petition was unanimously rejected by the board. However, the board instructed the state Department of Environmental Quality to develop a protocol for monitoring the situation in Roda and other Virginia coal communities.

In 2008, in response to rising complaints about excessive coal dust in the coal camp of Roda—located in Wise County, Va.—regional organization Southern Appalachian Mountain Stewards (SAMS) and the Sierra Club installed two dust monitors and conducted a two-week study of air quality. The results revealed up to three times the EPA’s acceptable level of dust.

Coal companies have assumed various voluntary measures to contain coal dust, including truck washers and street sweepers, but according Jane Branham, vice president of SAMS, “I have personally watched as coal trucks in Roda simply drive around the washer instead of through it.”

Residents in Roda attribute numerous health conditions to the coal dust, including high incidents of asthma and lung cancer. According to a report by the Virginia Asthma Coalition, health districts that include coal mining have some of the highest rates of adult asthma in the state.

EPA Proposes New Clean Air Emissions Standards, Enforces Clean Air Act

By Jamie Goodman

Despite recent backlash from industrial supporters over the EPA’s actions to regulate environmental impacts, the U.S. agency is taking a stronger stance on clean air.

In mid-March, the agency announced the proposal of new national standards for mercury, arsenic and other toxic pollution from coal-fired power plants. The proposed standards would require many power plants to install enhanced pollution control to cut the emission of harmful airborne toxins.

According to the EPA’s release, if instated, the measures would prevent as many as 11,000 heart attacks and 120,000 cases of childhood asthma symptoms and significantly reduce emergency room visits and hospital admissions. The plan would also create 31,000 short-term construction jobs and 9,000 long-term utility jobs.

The announcement falls on the heels of a settlement between the EPA and the Tennessee Valley Authority (TVA) over alleged violations of the Clean Air Act. In mid-March, TVA agreed to pay a $450,000 penalty for releasing unpermitted sulphur dioxide and nitrogen oxide into the air at its Widow Creek Power Plant in Stevenson, Ala.

TVA will also be required to eliminate 931 tons of SO2 and 13 tons of nitrogen oxide from their permitted emissions allowance.

Clean Air Act Amendments enacted more than 20 years ago mandated that the EPA require industry to control toxic air pollutants such as mercury, but at the time no national standard was set for toxic emissions levels.

The EPA will conduct a 60-day public comment period, holding public hearings on the proposed Clean Air Act standards to take input and feedback.

Two New Reports Look At High Costs of Coal

By Jeff Deal

Two new studies have a lot to say about the externalized cost of coal use.

When considering the damages caused by coal mining, processing, burning and waste disposal, the cost of electricity is actually double or triple the price paid by ratepayers to electric utilities. The report by the Harvard Medical School’s Center for Health and the Global Environment also found that the cost to society could be lowered by boosting the manufacture and installation of renewable energy technologies, promoting energy efficiency, ending mountaintop removal coal mining and enforcing water quality standards. You can read the full report (Mining Coal, Mounting Costs) at chge.med.harvard.edu/publications/reports/.

A related report by a group of government health agencies found that increased electricity usage does not provide “greater health benefits” in countries with an infant mortality rate less than 10% and a life expectancy greater than 57 years of age. The study also discerned “significant” harmful health effects with the use of coal. Read more of this report (Estimating the Global Public Health Implications of Electricity and Coal Consumption) at ehp03.niehs.nih.gov/article/info%3Adoi%2F10.1289%2Fehp.1002341.
The debate is over - at least in the scientific community. Over ninety-four percent of experts in the field agree that the climate is warming due to human activity. In 1998, nearly 75% of Americans believed that “solid evidence” of climate change existed. Due to a well-funded campaign by the fossil-fuel industry to create “controversy,” that number has dropped to a low of 58%.

With help from the website SkepticalScience.com, we identified the top 10 arguments used to denigrate-caused factors on climate change and provide a brief summary of why those arguments are wrong or misleading.

1. Global warming is caused by the sun.
2. Climate has changed before, so it can’t be caused by human activity.
3. There is no consensus among scientists that humans are causing climate change.
4. The earth is cooling, not warming.
5. Antarctica is gaining ice, not losing it.
6. The temperature record is unreliable.
7. It hasn’t been warming since 1998.
8. Scientists were predicting another ice age in the 1970s.
9. Climate models are unreliable.
10. Global warming is not a bad thing.

A new study proposes the possibility of weather stations being used to provide evidence of global climate change. The study is based on the idea that weather stations are “improperly” located, in an effort to attribute warming over the past few decades to natural factors such as increases in greenhouse gases. The study concludes that the data from these weather stations is unreliable and cannot be used to support the claim that global warming is occurring.

In a recent study, scientists used a climate model to simulate the effects of increased greenhouse gas emissions on future climate. The model predicted that global temperatures would continue to rise, but at a slower rate than predicted by previous models. The study concluded that this is evidence that the current climate model is not reliable and that future predictions should be made with caution.

Global warming is a serious issue that requires immediate action. The scientific consensus is clear: human activities are causing the climate to change. It is up to us to take responsibility and reduce our carbon footprint in order to protect our planet for future generations.
Appalachia and Our Changing Planet

By Bill Kovarik

Appalachia has always been a refuge for biodiversity. During the last ice age 20,000 years ago, the Appalachian mountains were a Noah’s Ark for thousands of species until the glaciers receded.

In the 19th and 20th centuries, many of our own species trooped off to spend their summers in the mountains, flocking to resorts around Asheville and Boone, N.C., and the Blue Ridge in Virginia, to escape malaria and summer heat along the coasts.

Modern refugees from urban stress still seek solace in the forests and if sea levels rise as quickly as scientists are predicting, another wave of refugees can be expected in a generation. What will be left of the forests, native species and water resources?

Can Appalachia survive climate change? Will it continue to serve its timeless role as a refuge for biodiversity? Dozens of major studies are underway to answer these questions. The initial results, as one scientist said, are grim.

Ecology vs. The Changing Climate

A Game of Knowns, Unknowns, and Unknown Unknowns

By Sarah Vig

When it comes to climate change, “we have the knowns, the unknowns, and the unknown unknowns,” said Steve McNulty, an ecologist with the U.S. Forest Service.

According to McNulty, the “knowns” are scenarios scientists can expect to develop with climate change and managers have an established best practice technique.

“It is commonly held that the way to manage a forest faced with drought stress is forest thinning,” said McNulty.

The “unknowns” are factors that scientists expect to be affected by climate change, but don’t know how, such as the behavior of invasive insect species. The “unknown unknowns,” McNulty said, are the “surprises;” by virtue of their obscurity, these clearly have the most potential to seriously impact ecosystems.

Take the case of the southern pine beetle, a tree parasite that lays its eggs under the bark of pines, where the larvae then feed on the tree’s living tissue underneath. Under normal circumstances, the beetle’s hosts are trees made vulnerable by sickness or age.

When the Asheville area was experiencing an extended drought in the late 2000s, the southern pine beetle spread farther north into territory it had not previously inhabited and began attacking spruce trees that grow in the higher elevations.

Contrary to expectations and previous behavior, it was the healthiest spruce stands that suffered the greatest impact. These trees were using the most water, but if those supplies dry up, it’s an entirely different challenge.”

During the 2007-2008 drought, portions of the Appalachian Trail in North Carolina had to be closed.

“For the present, water isn’t that serious a problem,” said Lenny Bernstein, who studied climate change for the Appalachian Trail Conservancy. “But if those supplies dry up, it’s an entirely different challenge.”

According to the U.S. Global Change Research Program, climate history shows the southeast has become hotter and drier with higher temperatures, dried-up streams and more forest fires.

Projections of severe climate change may affect Appalachia, consider the Appalachian Trail. Fifty years from now, hikers will probably have to cope with higher temperatures, dried-up streams and more forest fires.

“If those projections are real, and that’s where the future is, then 2008 is not going to be unusual.”

More and Larger Forest Fires

As summers grow hotter and drier, it’s likely that Appalachia’s stressed forests will harbor fewer birds and animals, and that a migration of many species to cooler climates will take place. However, its not easy to separate climate impacts from the already serious impacts of habitat encroachment and mountaintop removal coal mining.

From flying squirrels to bog turtles, Appalachia provides a home to an extraordinary diversity of species. It is considered to be one of the world’s great centers of biodiversity. Only two years ago, biologists found an entirely new genus of salamander -- the first new vertebrate genus to be discovered in the United States in half a century. Salamanders, however, are on the decline. In a 2010 journal article, JR Milanovich and colleagues found that climate change threatens “significant projected loss of habitat for many salamander species that currently occupy the Appalachian Highlands.”
Agricultural Production: AN ATMOSPHERE OF UNCERTAINTY

By Jillian Randel

Among growing concerns about the warming of the earth and the buildup of greenhouse gases is the impact that climate change has on our food supply.

Irregular precipitation patterns, rising temperatures and higher levels of carbon dioxide could govern how and what food is grown and sold in Appalachia and worldwide in the coming years.

The only reliable factor in this equation is the level of uncertainty that surrounds climate change and its impact on agriculture—an already volatile science based on hard-to-predict weather patterns. Uncertainty is the theme as atmospheric changes develop, followed by predictions on how these changes will affect our food chain as we move forward.

When it Rains, it Pours

Erratic behavior is the name of the game when it comes to precipitation patterns in the coming years. Scientists at the University of Maryland’s Center for Integrative Environmental Research predict a mix of longer, intense droughts and high volume storms and flooding.

“Dry weather can scare you to death but wet weather can starve you to death,” said Charles Church, owner of Watauga River Farms in Valle Crucis, N.C. “You worry a lot when there’s a drought cause you’re afraid your plants are not going to get watered enough, but too much water can totally ruin them.”

According to the Intergovernmental Panel on Climate Change, frequent flooding can generate low levels of oxygen in the soil, increase crop susceptibility to root diseases, cause severe erosion and increase runoff and leaching of agricultural chemicals into surface water.

“About a year ago we had a big rainfall on one corner of the [school’s] farm,” said Christof den Biggelaar, associate professor of Agroecology and Sustainable Development at Appalachian State University in Boone, N.C. “In that corner, all the onions and garlic roots were exposed because the rain had washed the soil away.”

Drought has also been a problem in Appalachia.

“For the most part rainfall here is pretty generous. You could count on about an inch a week, but the last few years it’s been difficult to plan on that,” said den Biggelaar. “With farming you look at longer term trends and it seems like over the last few years you have all these stats you almost have to throw out the door.”

It’s Getting Hot Out There

According to the U.S. Global Change Research Program, the annual average temperature in the Southeast has risen about 2°F since 1970. Temperatures in the Southeast are projected to rise about 4.5°F by the 2080s under a lower emission scenario, and under a higher emission scenario are expected to rise about 9°F by that time.

Higher temperatures benefit crops that grow well in the heat, but will negatively impact crops that prefer cooler growing seasons. Appalachia’s cool mountain growing climate provides the region with a distinct market edge.

“It is good for farmers here when they can grow cold weather crops during summer months and places like California and Florida can’t,” said den Biggelaar. “Broccoli prices go up and farmers can be competitive and still pay bills.”

When temperatures on the rise, plants demand more water to survive. Without adequate water for cooling, plants suffer heat stress.

“The problem is with unpredictability,” said den Biggelaar. “There are lot more small farms here that don’t have irrigation, but you never needed it because rainfall was regular and it never got really hot. Now that is changing.”

According to den Biggelaar, the Appalachian State Teaching and Research Farm has had trouble growing many Appalachian summer crops such as broccoli, spinach, cabbage and lettuce, making it hard to keep up with demand from their Community Supported Agriculture program.

Shorter and warmer winters will also negatively impact agriculture, according to the U.S. Global Change Research Program, with warmer temperatures affecting fruits that require more nights below a certain temperature. Many apples and berries require between 400 and 1,800 cumulative hours below 45°F to produce abundant yields.

“If spring gets warm earlier the trees might bud and then frost early and you lose your crop,” said den Biggelaar. “In 2007 there was a late Easter freeze and there were no apples and very few blueberries; we lost a lot.”

Carbon Dioxide: A Fair-Weathered Friend

One of the most widely recognized effects of climate change is increased levels of carbon dioxide (CO2). Increased levels of CO2 act as a fertilizer for many plants. In many greenhouses, farmers are finding ways to increase these levels to stimulate faster plant growth.

“Carbon dioxide is a double-edged sword,” said den Biggelaar. “For direct crop production it would be good, but higher CO2 in the air increases acidity of oceans and air, which is a bad thing.”

Rising Temps Make the Cows Come Home

Increased temperatures and humidity puts greater strain on livestock, which in turn reduces their ability to produce milk, gain weight or reproduce.

Animals suffer heat stress from longer and hotter summers. Just like plants, they require cooler nights to recover from heat. This recovery time will be harder to find with temperatures rising.

Studies done for the University of Maryland’s Center for Integrative Environmental Research show that a 9°F increase in temperature reduces livestock yield in animal and dairy operations by about 10 percent in the Appalachian region.

Variations in climate can also affect the forage that many animals rely on for their diet.

Weather: A Lost Ball in the High Weeds

Agriculture is a science based on predictions and patterns that often follow their own direction. It is a science that is hard to pin down and will never be exact.

“I have farmed my whole life and I’ve seen periods where it is extra hot and extra dry,” said Church, who doesn’t necessarily believe in climate change. “It’s something that has gone on since the beginning of time. I see year by year it can be hotter and dryer, then right back to wet the next year.”

Weather patterns are becoming harder to predict, but the question we must address is: what can we do now to ensure a secure future for our food systems?
Bartering for the Economy

By Jillian Randel

Consider the effects that a warming earth will have on the global economy. Ecology and environmental systems provide enormous benefits to the goods and services sector, reminding leaders that we live in a multi-layered, interconnected world. The Appalachian region presents a diverse array of economies susceptible to the impacts of climate change.

Knock on Wood for Forestry

The forestry industry is a backbone economy in many Appalachian communities. Increased temperatures and increased levels of CO2 in the air- two side effects of climate change- have uncertain effects on tree growth. While increased CO2 could stimulate forest growth, warmer temperatures could inhibit long-term growth.

“The climate is not going to do anything unless CO2 continues to rise,” said John Seiler, forestry professor at Virginia Tech in Blacksburg, Va. “If CO2 rates doubled, for example, photosynthetic rates would double. Even if it’s possible a little dryer trees may not care because they are eating twice as fast and don’t need to worry about eating when it’s dry.”

According to the U.S. Department of Commerce, Economics and Statistics, Tennessee ranks second in the nation for hardwood lumber production. In 2000, the forest product industry accounted for 6.6% of the state’s GDP, generating 21.7 billion in economic output and providing 180,000 jobs. Tennessee is not the only state in the region whose economy relies on forestry and lumber production. Kentucky, West Virginia, Virginia and North Carolina all gain from the economic benefits of the timber industry.

Even if trees do gain from the short-term benefits of increased CO2, there is still a big question about long-term survival for trees that prefer cooler growing seasons. The timber industry will see a huge decline if hardwoods are replaced by softer trees that carry less commercial value.

“The level of uncertainty is really, really high,” said Seiler. “It’s not going to be whether one individual tree survives, it’s going to be changes in competition between trees that survive. Chestnut oak seems to be coping better than black oak, so you might find chestnut replacing black oak. Survival is about who responds the best in the future environment.”

Pitching Camp with Outdoor Recreation

National Parks and other preserved areas stimulate spending in areas that are far away from cities and other destination spots. Think of all the spending that occurs on vacations: motels, bed and breakfasts, restaurants, retail stores, grocery stores, gas, camping, the list goes on.

Changes to ecology and habitat could dramatically affect outdoor recreation. The effects of climate change could cause species to move north in search of water and cooler climates.

The Outdoor Industry Foundation estimates that outdoor recreation adds $730 billion dollars to the U.S. economy annually and the central Appalachia states see many of these benefits (see table above).

Preserving land through national and state parks, land trusts and community parks establishes protection of scenic areas, drinking water, cold water fisheries, capacity of the land for carbon storage, habitat for wildlife and recreational activities like hunting, climbing, paddling, camping, fishing and other outdoor sports.

According to the North Carolina Ski Areas Association, revenue generated by the ski industry in 2009-2010 amounted to $146 million dollars and provided over 100,000 jobs. Warmer winters will shorten ski seasons and provide less favorable weather for snow.

“The thing with Virginia, West Virginia, Tennessee and Kentucky is that people don’t realize that most states do not have deciduous forests and copious amounts of water,” said Sissie Summers of the Central Offices Programming Administrator for West Virginia state parks. “Most places have one or the other, or neither. People in Appalachia forget that we have things that most of the world doesn’t have, and they are affordable, generational, treasured places.”

Climate change is directly linked to economic development. The extent to which business relies on atmospheric changes ranges from harmful- a small fly fishing business in West Virginia to catastrophic- a multi-billion dollar lumber industry in a state like Tennessee. We live in an interconnected world and Appalachia is particularly susceptible to the trickle-down effects of a warming earth.
Imagine a community where people can respond to economic downturns and fluctuations and availability of food with confidence. This community would be independent and self-sufficient. Members would cultivate, sell and store all their food needs, leaving little to be bartered with the outside world. Imagine a highly functional and effective transition initiative.

What does a town of 65,000 people eat? Where does this food come from and where does it go? Those are the questions Bill Sharple addresses through his State College, Pennsylvania, transition initiative.

“I have established a project to develop an architecture for local economies,” said Sharple. “It’s a process of defining what a self-sufficient community looks like and developing a model for a local economy.”

The Transition Network, started by a community in Totnes, U.K. in 2005, encourages communities to reduce energy consumption, moving away from nonrenewable and carbon-intensive energy sources to build local economies and food dependence. The idea has spread like wildfire, inspiring the development of over 350 transition towns worldwide over the past six years.

The State College initiative formally came into existence last spring and has since hosted a series of workshops on local foods, permaculture, rising gas prices and open forums on topics such as food and energy.

The initiative is working with local churches to develop community gardens; they helped plant one garden last year and already have two new garden projects in the works. One church has an acre they use to supply the local food bank, and Community Supported Agriculture (CSA) projects are thriving throughout the town.

“We have a group from the School of Living [an organization dedicated to establishing environmentally-sound communities] beginning to look at an incubator model to help people start homesteads for farmers markets or for their own use,” said Sharple. “Incubators encourage economic business opportunities by providing space, training and resources to ‘hatch the eggs’ of businesses and bring them to life.”

Katherine Watt, one of the other founders of the initiative, is working to establish a permanent farmers market to have a building where people can assemble and meet. She also has a blog and monthly column in the local newspaper about sustainability.

“Our goal is to reach self-sufficiency and to get 10 percent of our food grown locally within 10 years,” said Sharple, who estimates that State College currently consumes about one to two percent locally grown food. “You have to find out what works best for you. The bottom line is we have to come up with a higher degree of local self-sufficiency, and we can do that and still live a good life.”

Transition towns have powerfully impacted communities worldwide. What began as one town’s desire to move away from nonrenewable sources of energy has transformed into an entire movement addressing global economic and environmental issues.

To follow the State College blog, visit voicesweb.org.
Sequestering Your Carbon Footprint

By Jesse Wood & Jillian Randel

As consumers, all humans produce a carbon footprint—a measure of our impact on the earth’s resources. Home energy use, transportation, food and goods and services are part of everyday life, but each of these needs leaves their mark on the world’s forests, oceans and air.

There are plenty of easy and relatively inexpensive ways to soften our impact on the environment. A little bit of effort conserves a surprising amount of energy, which, in turn saves money and lowers our carbon footprint.

Transportation

Problem: Gas prices are rising. We continue to grow more dependent on foreign oil and fossil fuels, and are unable to prevent devastating oil spills. Yet, we all have to drive, and unless we live a few blocks away from our destination, it is not always practical to walk or bike to where we need to be.

Solution: Consider a fuel-efficient or alternative fuel vehicle. Carpool and consolidate household trips into town. Visit fueleconomy.gov to track, calculate and compare your vehicles fuel economy.

Bonus Round: If you bought a Hybrid or Diesel, Alternative Fuel, or a Plug-in/Battery Electric Vehicle in 2010, you may be eligible for a federal tax credit:
- Hybrid or Diesel – up to $3,400
- Alternative Fuel Vehicle – up to 4,000
- Plug-in Hybrid or Battery Electric Vehicle – up to $7,500

Goods and Services

Problem: According to the U.S. Environmental Protection Agency, in 2009, Americans produced about 243 million tons of Municipal Solid Waste, or about 4.3 pounds of waste per person per day.

Solution: Americans can reduce their consumption in small ways. Replace items only when you really need to. Recycle paper, glass, aluminum, electronics and plastic. Compost food waste for the garden and look for recycled products, particularly those labeled “post-consumer waste.”

Bonus Round: Visit myfootprint.org for an interactive way to track your own ecological footprint.

Appliances

Problem: According to the Con- sumer Energy Center, twenty-year-old refrigerators are among the most inefficient household appliances.

Solution: Look for the Energy Star label, which uses 60% less energy. As electricity prices rise, these appliances will pay for themselves. One of Hren’s favorite carbon-free home solutions is drying clothes the old fashion way – on a clothesline.

Bonus Round: Incandescent lights put 95% of their energy into heat and only 5% into lighting. Try Compact Fluorescent bulbs, which are at least 75% more efficient.

The Home

Problem: Homes consume large quantities of energy, and inefficiencies often go unnoticed.

Solution: Weatherization is a simple and cost-efficient way to increase your home’s efficiency. Caulking, weather strips and storm windows eliminate drafts during hot and cold temperatures. Consider double-pane windows and make sure your walls and ceilings are insulated.

If you are building a house, check out green design features such as passive solar heating, a rainwater catchment and recycled materials. Also, look for lumber that is sustainably forested.

And if you think solar panels and other renewable systems are right for your home and budget, go for it! There are plenty of tax credits for home owners, who install renewable energy systems in their homes.

Bonus Round: In North Carolina, if you install solar panels or a wind turbine on your land, you are eligible for a 35% state tax credit up to $10,500 per installation. If you install a solar water heating system, it is $1,400 per installation. On top of that, there are federal incentives available too. Plus, you can sell any excess energy you produce back to the utility grid.

Check out disreusa.org for federal and state tax incentives for renewable energy systems.

Government Energy Policies At Work

Our world governments have as much, if not more, responsibility for helping to curb greenhouse gas emissions. Although carbon-reducing legislation will likely receive less favor in the new U.S. congress, the current administration has in the past two years (and continues to announce new measures) made efforts to reduce emissions.

Recovery Act Investments in Clean Energy: The American Recovery and Reinvestment Act included more than $80 billion in the generation of renewable energy sources, expanding manufacturing capacity for clean energy technology, advancing vehicle and fuel technologies, and building a bigger, better, smarter electric grid, all while creating new, sustainable jobs.

Appliance Efficiency Standards: The Administration has established more stringent energy efficiency standards for commercial and residential appliances, including microwaves, kitchen ranges, dishwashers, light bulbs and other common appliances.

Leadership in Sustainability: President Obama signed an Executive Order on Federal Sustainability, committing the Federal Government to lead by example and reduce greenhouse gas emissions by 28% by 2020, increase energy efficiency and reduce fleet petroleum consumption.


Making Homes More Energy Efficient: Recovery Through Retrofit will eliminate key barriers in the home retrofit industry by providing consumers with access to straightforward information about their home’s energy use, promoting innovative financing options to reduce upfront costs and developing national standards to ensure that workers are qualified and consumers benefit from home retrofits.
Appalachia and Our Changing Planet

Continued from page 16

Native trout are also endangered, according to a “grim prognosis” by Patricia Flebbe, research biologist for the U.S. Forest Service. Between 53 and 97 percent of wild trout populations in the southern Appalachians could die out as streams become warmer, Flebbe and other Forest Service researchers said. Trout are coldwater species that depend on relatively low stream temperatures to survive. “Trout are already at the southern limit of their range,” Flebbe said. “Suitable habitat area will shrink and become much more fragmented as the climate becomes increasingly warm.”

Forest service researchers say that climate change will likely pose a severe threat to Fraser fir, Balsam fir and Carolina hemlock of the central and southern Appalachians. These species occur in higher elevations and are also currently under siege from exotic pests like the woolly adelgid. Other tree species—the Table Mountain pine, Red spruce and Striped maple—may survive in the north, but face extinction in central and southern Appalachia as a result of changing climate conditions.

Many studies on the impacts of climate change focus on single species, but broader studies of ecosystems also reflect high risks. The types of animals that will be hardest hit are those that are narrowly distributed in habitat, according to Mark Schwartz and colleagues writing in the journal *Climate*. Focusing on trees and birds of the eastern United States, the scientists found that extinction vulnerability increases for species that are not as widely distributed.

It is this vulnerability which give some grave pause about the future of Appalachia in the face of our changing climate.

*Charts from United States Global Change Research Program, www.globalchange.gov*

Ecology vs. The Changing Climate

Continued from page 16

producing the least amount of resin, and therefore less able to keep the beetle from infesting under their bark.

McNulty is well-versed in ecological stressors through his position at the USFS Eastern Forest Threat Assessment Center, but explained that climate change is unique because it will bring about “new combinations of events that we haven’t seen before.”

The USA National Phenology Network (USA-NPN) brings together two important resources to help shed light on some of these unknowns: professional scientists and the capacity for extensive data collection.

Phenology is the study of recurring plant and animal life cycle stages, especially their timing and relationships with weather and climate. Anyone who has ever made note of the first robin in springtime, or the first tree to turn color in fall has made a phenological observation.

USA-NPN capitalizes on the simplicity of making observations to collect a massive amount of data nationwide through their citizen science program, Nature’s Notebook. Since 2008, Nature’s Notebook has garnered 3,000 registered observers who have made 76,000 phenological observations.

With this data, USA-NPN can establish patterns of change and identify species’ responses to both seasonal weather changes and longer-term climatic change.

According to USA-NPN, some will be indirectly affected by climate change because they are out-of-sync with a changing climate. For instance, a migratory bird’s migration patterns might be cued by day-length in North Africa while its food source in its springtime home—insect larvae—has a lifecycle triggered by plant growth; if spring comes earlier, the larvae may be reaching maturity before the bird arrives.

Alyssa Rosemartin, Acting Assistant Director for USA-NPN, said that phenology is a key tool in identifying vulnerable species in different ecosystems by their “likelihood to mismatch,” like the bird and the larvae.

Rosemartin pointed out that it “may not be possible to maintain ecosystems the way they are (or have been).” While the contemporary data set might not be able to show obvious and serious climate-related impacts yet, “the data we’re collecting now will be able to help us determine management practices,” she said.

The Appalachian Trail Conservancy suggests that in the Blue Ridge of Virginia, red spruce is at risk of disappearing. It is found only at the highest elevations, and is migrating upslope to adapt to warmer seasonal temperatures. Due to its limited area of cover, it may not survive.

With the abundant biodiversity present in the Appalachian mountains and the microclimate variations that have driven that variety, adaptations to climate disruption will be challenging. Quite simply, the amount of biodiversity means that Appalachia may have more to lose and attempts at man-made solutions become infinitely more complex. “It’s a matter of triage,” said McNulty, “… it’s a lot of critters to get in the boat.”
Editorial

Fossil Fuels & Nuclear: How Costly is Too Costly?

Before the flood waters had fully receded from Japanese towns shattered by a 9.0 earthquake and 30-foot tsunami, and while firefighters were racing to cool down a category 5 nuclear disaster (still smoldering as we go to press), some in the energy industry were stumbling over themselves to tout the benefits of fossil fuels over nuclear.

Nuclear industry reps stressed the idea that America could construct expensive, new and supposedly “safer” nuclear plants, while coal industry reps took it a step further—suggesting we use more fossil fuels to replace nuclear.

Yet isn’t the over-reliance on both of these sources of energy the root of our problem?

Appalachians are already dealing with devastation from global climate change and toxic waste from energy production: radical flooding, fouled water from coal mining-processing and toxic air emissions from fossil fuel electric plants. Some communities are literally losing their backyards and family farms to mountaintop removal coal mining. Haven’t we already paid too great a price for coal, oil and nuclear energy?

Nuclear energy in the US has only survived for 60-odd years because of enormous subsidies like the Price-Anderson Act of 1957—legislation that saddles the American taxpayer with ALL expenses over $10 billion dollars for any and all nuclear disasters within our borders.

Using sources of energy like nuclear and fossil fuels will always be inherently dangerous—and the safety of these plants relies on the industry to remaining ever vigilant. Yet time and again we see that cutting corners where safety is concerned is just part of doing business.

This condition was clearly seen in 2002, when the Tokyo Electric Power Company (operator of multiple nuclear power plants, including the damaged Fukushima facility) admitted to falsifying maintenance reports at their plants on “hundreds of occasions” for more than two decades.

In Appalachia, coal giant Massey Energy Co., received the largest civil penalty in EPA history in 2008—$20 million—for Clean Water Act Violations in Kentucky and West Virginia. Two years later, 29 miners died in Massey’s Upper Big Branch coal mine; disabled safety equipment was later found in the area where the fatal explosion occurred.

Although the nuclear disaster in Japan is what has dominated the news, cleaner technologies—like the offshore wind turbines located less than 200 miles from the epicenter of Japan’s recent earthquake—not only survived the disaster but are “fully operational.”

The renewable energy of planet Earth—solar, wind, hydroelectric and geothermal—is far greater than all known supplies of coal, oil and nuclear. These technologies not only stem the rising tide of global climate change and environmental pollution, but offer Americans new jobs and economic opportunities for decades to come.

This is especially the case for Appalachia. We, as a nation, just need to green up our act.

Viewpoint

Seeing God’s Face in the Dirt

By Rev. Pat Watkins
Culpepper UMC - 15 Nov 2009

Cain was a farmer, rooted in the soil. Farming was his life, his existence, his very being was connected to the earth.

And that is precisely why Cain’s punishment was so hard for him to bear.

Because he killed his brother, God said, “You are cursed from the ground. When you till the ground it will no longer yield to you its strength; you will be a fugitive and a wanderer on the earth.”

For Cain, rooted in the earth as a hundred year old oak tree, the punishment was devastating.

Listen to how he responded to God’s sentence! He said to God:

“My punishment is greater than I can bear! Today you have driven me away from the soil, and I shall be hidden from your face.”

Cain’s relationship with the earth was connected to his relationship with God; to lose his relationship with the earth was to be hidden from the very face of God. Now I realize we’re not all like Cain. We don’t see our identity as being so rooted in the earth as Cain did.

But perhaps that’s part of the problem?

Ironically, Cain’s punishment created for him a lifestyle very similar to the one we live today. His punishment was that he would become a fugitive and wander on the earth, with no rootedness to a geographical place.

But isn’t that who we are?

Oftentimes we choose where to live based on our career. Sometimes we have to choose location based on the school systems. When we retire, we might want to go to the coast or the mountains or to Florida where it’s warm all the time. We have no rootedness to any particular spot of land anymore.

We have removed ourselves from God’s creation. We relate to God and to each other, but for the most part we don’t relate to God’s creation anymore. Gone are the days when kids spend more time outside than inside. In one short generation, we’ve lost our connection to God’s creation. Most children have no earthly idea where their food comes from. And most adults don’t know where their electricity comes from or where their gasoline comes from.

How do we recover a good relationship to God’s creation? How do we demonstrate that relationship in the life of the church?

I simply want you to realize that there is a great deal of Biblical evidence to suggest that there really is such a thing as a relationship between you and me and God’s creation. And it is up to you to figure out how to appropriately live out that relationship in your life and in the life of your church.

If our faith as Christians is not informing positions we take and decisions we make; if our faith does not engage us in making the world a better reflection of the Kingdom of God for the sake of the gospel, then we’ve missed half of what it means to be a Christian.

If Cain were here today, I think he’d leave us with this thought.

He’d say,

“Stare at a sunrise with your mouth hanging open. Examine an orchid and allow its beauty to take your breath. Stand in the middle of the Redwood Forest Cathedral that God built. Gaze into the heavens, count the stars, and appreciate the vastness of the incredible Universe that God has created. Experience God in all that you see around you. Be filled with God’s fullness, God’s grace, this day and forever more.”
Arctic Gardens: Voices from an Abundant Land

Review by Jeff Deal

Few places on Earth have galvanized the hearts and minds of those seeking to safeguard and strengthen Earth’s precious cultural heritage and natural wonders like the Arctic. Dr. Harvard Ayers, Landon Pennington and David Harmon’s book, “Arctic Gardens: Voices from an Abundant Land,” is a firsthand account of the detrimental effects that fossil fuels and global warming inflict on one of North America’s last great wild ranges: the Arctic region of Canada and Alaska.

Through interviews with 100 native people - Indians, Eskimos and Inuvialuit - the authors document the formidable challenges wrought by industrial global climate change on the cultures and people who have lived successfully in concert with the land and wildlife of the Arctic for thousands of years. The eyewitness accounts are supported by scientific evidence from the areas of biology, earth science, anthropology and ecology, and create a strong case for defending and bettering the world, on which all our lives, and the future, depend. You can purchase the book in print or electronic format at arcticvoices.org

TOP 10 Books on Climate Change

Climate change has become one of the most controversial and widely disputed topics facing today’s citizen, often dominating political and economic discussions. Below is a list of some of the most recognized books on climate change, ready to equip you with the knowledge to tackle the climate debate at your next gathering.

10. Earth: The Sequel by Fred Krupp and Miriam Horn. Krupp and Horn focus on environmental entrepreneurs—among them three young scientists who genetically engineer yeast to ferment into sugar to use as green fuel. These scientists not only help guide us to a secure energy future, but gain wealth through their inventive ideas. A perfect read for unique, yet realistic solutions to climate change.

9. Climate of Uncertainty by William Stewart. Stewart’s examination of the major climate change issues—renewable energy, increasing populations and sustainability—has gained attention for its comprehensive and easy-to-follow look at all sides of the climate debate. The perfect read for someone seeking an objective voice.

8. The Hot Topic: What We Can Do About Global Warming by Gabrielle Walker and David King. Walker, a contributing editor for New Scientist, and King, chief science advisor at University of Cambridge, team up to explain the science of warming and provide a guide to both the problems and the solutions. They explain fossil fuels, carbon dioxide, the effect on ecosystems and how much more the earth and humans can take before things reach catastrophic levels.

7. Our Choice: A Plan to Solve the Climate Crisis by Al Gore. Solutions are the overriding theme of Gore’s latest book on climate change. Former U.S. vice president, Gore fills this book with interesting debates on energy, population and resource depletion. He provides solutions to the climate crisis developed during his travels and includes discussions with leading experts on climate change.

6. Cool It: The Skeptical Environmentalist’s Guide to Global Warming by Bjorn Lomborg. TIME magazine named Lomborg one of the 100 most influential people in the world. A political scientist and economist with a conservative approach to environmentalism, Lomborg has been described as the “bad boy of the climate circus.” Cool It, however, offers a refreshingly independent perspective on the global warming debate.

5. Collapse: How Societies Choose to Fail or Succeed by Jared Diamond. Diamond examines how and why Western civilizations develop technologies and immunities that allow them to dominate the world. He examines what caused the great civilizations of the past to collapse into ruin. While his approach may not address global warming directly, however, his discussions on eco-suicide and the climate debate keep the pages turning.

4. The Two-Mile Time Machine by Richard B. Alley. According to glaciologist Alley, ancient ice cores drilled on Greenland contain the history of the earth’s weather and serve as an archive of information about our climate patterns. Alley explores this history and explains the discovery process in a way that all audiences can understand while still laying out the issues.

3. With Speed and Violence: Why Scientists Fear Tipping Points in Climate Change by Fred Pearce. Considered one of the most up-to-date books about the constantly accumulating evidence for global warming and its dramatic effects, Pearce provides an intelligent, yet understandable warning about the dangers of abrupt, accelerating global warming and how pressure from natural forces can cause abrupt changes that will drastically shape the earth’s course.

2. The Weather Makers: How Man is Changing the Climate and What It Means for Life on Earth by Tim F Flannery. Paleontologist and mammologist Flannery explains the basics of how the atmosphere works today compared to how it has in the past. He hits on topics such as greenhouse gasses and acid rain and calls for action now to prevent further damage.

1. Hot, Flat, and Crowded by Thomas Friedman. Friedman, a New York Times columnist and 3-time Pulitzer Prize winner, explains how global warming, rapid population growth and expansion of the world’s middle class through globalization have produced a planet that is “hot, flat and crowded.” He introduces a national strategy he calls “Geo-Greenism,” which gives solutions to the climate crisis as well as insight to making America a better place.
By Kerri C. Weatherly

When I first noticed a Scarlet tanager, I was instantly enchanted. Its rich, red feathers caught my eye—a burst of color is a sea of green.

I glanced up, and observed the bird as it sat, perched high in the limbs of blooming, leafy trees in the forest. The air was warm, the sun was bright and school had just let out—the Scarlet tanager’s radiant plumage and light-hearted chirp seemed to represent everything that was summer.

The vibrantly colored male Scarlet tanager is generally recognized for its eccentric scarlet feathers, but a little-known fact is that they are one of the only species of tanagers that experience drastic seasonal variance in plumage.

The often-overlooked female Scarlet tanager has year-round olive-yellow feathers.

The wings and tails of both the male and female Scarlet tanager are black or dark brown year-round. During the fall, the male’s exotic color fades to a muted olive.

Scarlet tanagers are classified as American songbirds and are members of the Cardinal family. They live and travel in flocks—called “seasons”—and range throughout central and southern Appalachia, as well as parts of the northern and western United States.

They are medium-sized birds, averaging about seven inches long with a wingspan of about 11.5 inches, and weighing just under an ounce. The diet of Scarlet tanagers consists of mostly insects, worms, snails, berries and fruits.

The voice and song of the male is similar to the song of a hoarse robin—a unique chik-burr. The female also sings, but has a softer, less raspy voice, and sings in response to her male mate, or when she is gathering twigs and grasses for her nest.

Scarlet tanagers are monogamous, and raise one brood of offspring per season. Each brood consists of between one and six eggs, with averages of around four eggs per season. The female bird incubates eggs for close to two weeks, and then the nestlings are fed insects and fruit until they fledge.

Female Scarlet tanagers build shallow nests out of sprigs, weed stalks and fine grass. The female bird then places the nest on a branch, usually between seven and 40 feet high.

Scarlet tanagers inhabit and flourish in extensive, mature hardwood and hardwood-pine forests, and generally require between 25 and 30 acres to thrive.

The Scarlet tanager is a beautiful representation of brightness and warmth of summertime in southern Appalachia. The rich color of its plumage and its peaceful lifestyle are symbolic of a refreshing, slow-paced afternoon in beautiful Appalachia.

While Scarlet tanagers live and thrive in the southern Appalachian region during the summer, they require cooler temperatures and dense foliage for adequate shade from the heat. Rising temperatures caused by global warming may force this beautiful species to relocate to cooler climates.

Other bird species in southern Appalachia threatened by climate change include almost all Warblers, the Black-capped Chickadee, Tree Swallows, the Purple Finch, the American Redstart and Flycatchers.
Folks have been coming to Grandfather Mountain for generations. For the views, the hiking, the animals — and to see what happens when you let nature take its course.

www.grandfather.com

{Come see what three hundred million years of landscaping looks like.}
Our ongoing legal action against the two largest mountaintop removal coal companies in Kentucky, totaling over 20,000 violations of the Clean Water Act, continues. We also initiated legal action against another coal company with a startling amount of Clean Water Act violations.

Declaring “an abuse of discretion to deny those citizens and environmental groups the right to participate in this action,” State Judge Shepherd granted us approval to conduct discovery (physical investigation) and deposition (interview) on the settlement proposed by the Kentucky Energy and Environment Cabinet with ICG and Frasure Creek Mining, in order to determine whether the settlement negotiated is “fair, adequate, reasonable and consistent with the public interest.”

The Kentucky Cabinet attempted to appeal the decision to a higher court of law, characterizing our intervention as an “unwarranted burden.” We countered that the move was premature, inconsistent with the law and not in Kentuckians’ best interests. The appeal motion was dismissed and a hearing is set for June 14.

Our legal team consists of Kentuckians for the Commonwealth, Kentucky Riverkeeper and Waterkeeper Alliance, represented by Pace Law Center.

Same Water Violations, Different Company
This same team, along with lawyers from Natural Resources Defense Council, announced on March 9 our intent to sue Nally & Hamilton Coal Company for more than 12,000 violations of the Clean Water Act. Our evidence indicates that Nally and Hamilton—like Frasure Creek and ICG—filed false and potentially fraudulent water pollution monitoring data with state agencies over the past three years for more than a dozen of its operations in seven eastern Kentucky counties.

Data we collected indicates that Nally & Hamilton may have “cut-and-paste” previous sets of data in later reports rather than monitoring the discharge and submitting accurate data for each month. The company may have also repeatedly omitted legally-required data from its reports.

If fined, the maximum allowed under the Clean Water Act would amount to potential penalties of more than $400 million. Nally and Hamilton, as well as the state, have 60 days to respond. While we have yet to receive an official response, Nally & Hamilton has completely removed their website from the internet.

To read about the numerous twists and turns in these cases and for up-to-date information, please visit appvoices.org/kylitigation.

We Need Your Help
Appalachian Voices needs $25,000 to hire handwriting experts, forensics experts, conduct depositions and other correlated research. A generous donor pledged $12,500—half the amount—but only if we can raise the remaining $12,500 by Earth Day, April 22. Learn more at appvoices.org/waterdefense, or fill out the form below to donate!
Sealing the Deal on Harmful Sealants

Thanks to efforts by our Upper Watauga Riverkeeper team, the town of Boone, N.C. passed strict new regulations aimed at limiting the impacts of coal tar-based asphalt sealant on local waterways. A spill of the sealant into the town’s Hodges Creek last fall devastated more than a mile of aquatic stream life and lead to the town council’s review and ultimate decision, which will require residents and business owners to get approval for permits to apply sealant to sidewalks and driveways. Processing fees for the applications will be directed to costs of oversight and regulation of the new ordinance.

Join us for Earth Day!

Staff from Appalachian Voices will venture to several points in Appalachia for Earth Week events. Come meet with us and learn more about our work to protect the air, water, land and communities of Appalachia. Look for us in the following locations:

- April 16 -- 2011 Piedmont Earth Day Fair, Winston-Salem, N.C.
- April 16 -- Charlotte Green and Clean, Charlotte, N.C.
- April 16 -- Planet Art, Asheville, N.C.
- April 20 -- Appalachian State University, Boone, N.C.
- April 22 -- Eco Fair on the downtown mall, Charlottesville, Va.
- April 22 -- Trees on Fire concert, Jefferson Theater, Charlottesville, Va.

See our Earth Week story on page 7 for details on events throughout Appalachia.

Protecting Our Mountains Through Cinema

Appalachian Voices has partnered with Uncommon Productions and DADA Films to help promote The Last Mountain Movie, a passionate and personal tale about the struggle over powering America with Appalachian coal and the detrimental consequences it generates. Written, directed and produced by award-winning documentary filmmaker Bill Haney, the film opened to critical acclaim at the 2011 Sundance Film Festival, and anticipates a limited theatrical release on June 3.

Appalachian Voices will be attending special screenings of the film to assist at informational tables and participate in a 20-minute Q&A following the screenings. Currently we have scheduled screening visits for June 3 to 9 in Sunshine, N.Y., and Washington, D.C. Dates are tentative as of this issue’s publication; visit AppVoices.org for screening details and be sure to check out thelastmountainmovie.com to watch the trailer and read more about this exciting new cinema release.

Meet Emma - A Future Mountain Protector....

Appalachian Voices would like to welcome the newest member to our family! Emma Elizabeth Randolph, daughter of J.W. Randolph (our Washington, D.C. Legislative Associate) and his wife, Elizabeth (graduating from medical school at the University of Virginia), was born on February 25 at 10:41 a.m. with an honestly inherited predilection for loving people and the planet. She enjoys lazing about on her blanket, fresh cloth diapers, quality time with mom and taking walks on the Rivanna River. She anticipates canoeing, climbing and loving mountains for a long, long time.

No, It’s Not St. Patrick’s Day, It’s Green Drinks!

Be sure to mark your calendars for Tuesday, May 10, from 5:30- when Appalachian Voices will host Green Drinks at our downtown Boone, N.C., office. The event will feature a small cover for all-you-can-drink regional brews (bring your own glass!) and a short presentation on our work. Green Drinks is a monthly event in the High Country region of North Carolina that highlights local green businesses and non-profits, providing a laid-back atmosphere for socializing and networking. All are welcome to attend!

Virginia Loves Mountains, too!

As this issue of The Voice was going to print, Appalachian Voices and their allies with the Wise Energy for Virginia Coalition were gearing up for the second annual Virginia Loves Mountains Day. This year’s Virginia Loves Mountains Day was not a rally in any one place, but 11 rallies—one at each U.S. Senate regional office across the Commonwealth. Over 300 people are registered to participate, either by visiting Senator Webb and Warner’s district offices or by calling their offices in Washington, urging them to stand up for the EPA’s good work on mountaintop removal coal mining.

Currently, members of Congress are attempting to defund the EPA’s consideration of new mountaintop removal regulations that would limit mining waste from being dumped into headwater streams. For information on Virginia Loves Mountains Day, visit WiseEnergyforVirginia.org.

Welcome New Board Members!

We would like to welcome two new board members, voted in during our elections last fall—the Rev. Jim Deming and Cale Jaffe. Both bring years of environmental stewardship and conservation.

Rev. Jim Deming is the Minister for Environmental Justice for the United Church of Christ, and previously served as the Executive Director for Tennessee Interfaith Power and Light. Cale Jaffe is a senior attorney with the Southern Environmental Law Center and a lecturer at the University of Virginia School of Law.

Visit AppVoices.org/About to meet all of our Board and Staff!
Budding river warriors examine aquatic life during the 1st Annual Appalachian Voices Riverfest last summer. The 2nd annual RiverFest will take place on Saturday, June 4, in Valle Crucis, N.C. and will feature arts and crafts, river talks, live music, local food, a river float (if the level is high enough) and plenty of splashing about to learn more about our rivers! Visit our story on page 3 for a complete list of activities! Photo by Jamie Goodman

**Spring Forest Festival at Bent Creek**
April 2: Sponsored by the USDA Forest Service, come celebrate the forests of North Carolina. Participate in educational activities, a tour of Bent Creek experimental forest and see special guest Smokey Bear. 10am-3pm, free. Asheville, N.C. Visit: sfs.fda.usda.gov/news/464

**Growing Appalachia**
April 9: Local experts discuss how to save and earn money through small-scale farming, forestry and energy solutions. Held at Jenny Wiley Convention Center in Prestonsburg, Ky. 9:30am-3:45 pm. Visit: ktc.org

**Songbirds for Farm Birds**

**Sustainability Films: The Greenhorns**
April 12: The fourth installment of the Sustainability Film Series, The Greenhorns, will take place in the Green Auditorium on the Appalachian State campus in Boone, N.C. Begins at 7pm. Email: zimmerbw@appstate.edu or visit sustain.appstate.edu/film-series

**The Electric Fairy Screening**
April 11,12,14,16,19: A documentary that examines America’s national addiction to fossil fuels, The Electric Fairy is part of the Southern Circuit Film Festival and will play at Carson-Newman College in Jefferson City, Tenn. Visit: electricityfairy.org

**Reel Paddling Film Festival**
April 15: The 6th Annual Reel Paddling Film Festival will showcases the world’s best paddling films. IG Greer Theatre in Boone, N.C. $5 in advance and $7 at the door. Visit: op.appstate.edu

**Wild Education!**
April 16: A monthly adult evening series with conservation and wildlife experts. Located at the Western N.C. Nature Center in Asheville. 6-7pm monthly. Visit: www.wildwnc.org

**Power Shift 2011**
April 15-18: 10,000 people will convene in the fight for a clean energy future at this 2-day event. Washington D.C. Visit: powershift.org

**MerleFest**
April 29- May 1: It’s almost time for MerleFest again and this year they have another great lineup featuring Doc Watson, Robert Plant and the Band of Joy, The Doobie Brothers and many more! Visit: merlefest.org

**27th Exchange Place Spring Garden Fair**
April 30 and May 1: Thousands of native plants, herbs, perennials, heirlooms and garden accessories for sale at the spring fair. Also join in garden talks, children’s activities, music and traditional foods. Kingsport, Tenn. Call: 423-288-8071.

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There’s no better way to celebrate warmer days and longer nights with Appalachian summer music and arts festivals. From cultural bluegrass festivals to award-winning barbecue festivals, Appalachian has it all—some of them are even free! Take a look at the partial list below and visit AppVoices.org/thevoice for our complete Summer Festival guide!

**Festival In The Park**
- May 7 to 10 - Roanoke, Va.

**Lake Eden Arts Festival (LEAF)**
- May 12 to 15 - Black Mountain, N.C.

**Ralph Stanley’s Hills of Home Bluegrass Festival**
- May 26 to 28 - McAlpine, Va.

**Fiddler’s Grove Old Time Fiddlers & Bluegrass Fest**
- May 27 to 29 - Union Grove, N.C.

**Graves Mountain Festival of Music**
- June 5 to 6 - Syria, Va.

**Blue Plum Festival**
- June 3 to 5 - Johnson City, Tenn.

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**Nestling Party**
May 7: Learn about cloth diapering, harmful chemicals to avoid and much more! The event is free and includes a 10% in-store discount. Asheville, N.C. 2-4pm. Please RSVP: 828.258.1901

**Shenandoah Riverside Festival**
May 6-8: Featuring Midnight Spaghetti and the Chocolate G-string, Future, The Vegabonds and many more, this festival is a weekend-long camping adventure. Proceeds benefit the clean-up of the Shenandoah River. Visit: shenandoahriversidefestival.welcom.com

**Black Mountain Weekend**
May 6-8: Wildflower lovers will enjoy visiting Black Mountain, the highest point in Kentucky and habitat to rare species of wildflowers and birds exclusive to the mountain. Pine Mountain, Ky. Visit: pinemountainsettlementschool.com

**Wild and Woolly Forest Festival**
May 7: Come participate in the native plant sale, wine tasting and contra dance. Featuring Janisse Ray, author of Ecology of a Cracker Childhood, Wild Card Quilt, Pinknook and...