

Non-Profit Org.  
U.S. Postage PAID  
Permit No. 2831  
Charleston, WV

*Return Service requested*



# The Highlands Voice

The Monthly Publication of the West Virginia Highlands Conservancy

Volume 43

No. 10

October, 2010

Compromise and consideration the key

## NORTH FORK WILDERNESS BILL MOVES FORWARD

By Mike Costello

In 2009, conservationists in West Virginia celebrated a monumental victory with the passage of the Wild Monongahela Act and its protection of around 38,000 acres of threatened wild lands. Thanks to the continued efforts of our state's congressional delegation, yet another unique treasure of the Monongahela National Forest stands to achieve permanent Wilderness protection.

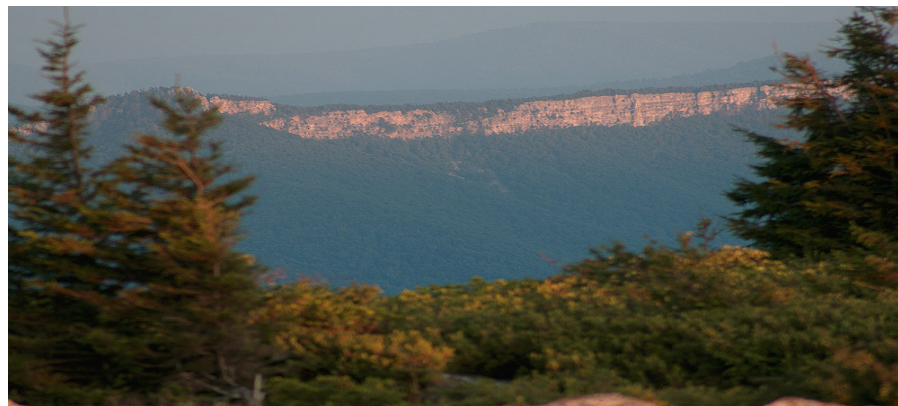
The North Fork Mountain Proposed Wilderness Area was included in the recently introduced Monongahela Conservation Legacy Act, sponsored by Representative Alan B. Mollohan.

Permanent protection of this special area is by no means a new idea. North Fork Mountain was proposed for Wilderness designation in 2004, with the release of the original Citizen's Proposal for Wilderness on the Monongahela National Forest. This proposal, which included 15 special areas totaling around 150,000 acres, was finalized after conceding areas such as Tea Creek and Canaan Mountain in response to mountain biking and wildlife management concerns. This popular proposal was supported by religious organizations, labor groups, local governing bodies and

nearly 150 businesses statewide.

The North Fork Mountain area as originally proposed was much larger than the 6,042 acre tract currently included in pending legislation. As the Monongahela Conservation Legacy Act was drafted, significant compromises were offered in order to strike a

balance among user groups. In an effort to further accommodate the mountain biking community, the proposed area was reduced by around 3,000 acres. The concession of one-third of the area ensured that cyclists would retain access to the vast majority of the North Fork Trail, as well as the Redman Run Trail, which would have been included in the wilderness boundaries as originally proposed.



North Fork Mountain Photo © Jonathan Jessup

Additional compromises include a boundary revision to address management concerns of the U.S. Forest Service; an additional adjustment ensured that trout stocking by local business owners and the West Virginia Division of Natural Resources could continue.

Although the area included in the Monongahela Conservation Legacy Act is much smaller than what conservationists originally

**(Continued on p. 3)**

### What's inside:

Thoughts from President Hugh	2	Science panel weighs in on MTR	7	Poetry	14
Roster of officers	2	Marcellus Shale	8	Roaring up the plains	15
Annual meeting coming up	3	Get a Hiking Guide	10	Camping at Sherwood	16
Gas wells for Chief Logan?	4	Speakers available	10		
Blackwater Canyon	4	Outings	11		
Drilling in the karst	5	Worries about Marcellus shale	12		
How to join	6	Rehab for trout streams	13		
Get a history book	6	Letters	14		

## A Voice For Wilderness

Last month's *Highlands Voice* included a piece by Michael Gray opposing wilderness designation for North Fork Mountain. On the facing page, our editor, John McFerrin, placed a reminder about "the way the *Voice* works," specifically referring to an article in the August issue favoring such designation.

Not all that appears in the *Voice* reflects the official position of the West Virginia Highlands Conservancy. The Conservancy speaks through its Board of Directors. The *Voice* reports actions and positions of the board—but it also prints arguments pro and con about ways to conserve our natural resources. That can make for a livelier paper, a better-informed membership, and ultimately better decisions by the board.

Unfortunately, this editorial policy sometimes causes confusion. In spite of the disclaimer, some readers are shocked by what they find in the paper. "Really, what were you thinking??!" one member wrote to me when he saw Mr. Gray's piece.

We've been through this several times on the issue of wind power, and more recently when at least one member thought the board had adopted a position in favor of nuclear power. Not true.

Yet this time felt different to me and to people we have worked with over many years to secure wilderness protection for special areas in our highlands. Before I get into the specifics of the piece, I want to apologize for my part. John's disclaimer explained why "stories in the *Voice* often reflect different points of view." He added that our board had "never spoken on the question" of a North Fork Mountain Wilderness, and thus neither of the two pieces, for and against, was the Conservancy's official position.

The Highlands Conservancy is a founding (and funding) member of the West Virginia Wilderness Coalition; we have always supported and participated in its work; and we voted in favor of the 2004 Citizens' Proposal for Wilderness, in which North Fork Mountain was fourth on a list of fifteen areas. North Fork Mountain didn't make it onto the final list of six new or expanded wilderness areas in the Wild Mon Act, for reasons I'll mention below.

The board discussed our efforts toward a new bill at the July meeting. Had I crossed all the t's and dotted all the i's, I would have asked for a vote to reconfirm our support after several changes had been made to the original proposal. Now I have done so, and the board has unanimously voted in favor. So our official position is clear.

Anyhow, that misunderstanding was not the principal reason that people I heard from objected to the article. And I doubt that readers were misled by its obvious misstatements about the origin and consequences of the proposal.

But I know that readers were dismayed by its *tone*. The piece amounted to a stink bomb lobbed at our congressional sponsor, Rep. Alan Mollohan, with a sideswipe at the author of the pro-wilderness article.

The Wild Monongahela Act of 2009 was a great achievement, but it didn't finish the task. To his credit, Rep. Mollohan was willing to keep working with us. He generously allotted staff time to the effort, and his staff was unfailingly helpful. Sure, he had the support of his constituents; but he could have said that he'd already secured designation for two areas in his district—Dolly Sods North and the

## Roster of Officers, Board Members and Committee Chairs and Board of Directors

PRESIDENT: Hugh Rogers, Moon Run, Kerens, WV 26276, (304)636-2662, hugh.rogers@gmail.com

SENIOR VICE PRESIDENT: Buff Rodman, 32 Crystal Dr., Oakmont, PA 15139; (412) 828-8983; buffrodman@hotmail.com

VICE PRESIDENT FOR STATE AFFAIRS: Julian Martin, 1525 Hampton Rd., Charleston, WV 25314, (304) 342-8989; martinjul@aol.com

VICE PRESIDENT FOR FEDERAL AFFAIRS: Marilyn Shoenfeld, HC 70 Box 553, 23

Sands Springs Lane, Davis, WV 26260, (304) 866-3484, marilyn.shoenfeld@gmail.com

SECRETARY: John McFerrin, 114 Beckley Ave., Beckley, WV 25801, (304)252-8733, johnmcferrin@aol.com

TREASURER: Bob Marshall, 886-Z Divide Ridge Road, Kenna WV 25248 (304)545-6817, woodhavenwva@aim.com

PAST PRESIDENT: Frank Young, Rt. 1, Box 108, Ripley, WV 25271, (304)372-3945, fyoung@mountain.net

DIRECTORS-AT-LARGE (Terms expire October 2010)

Don Gasper, 4 Ritchie St., Buckhannon, WV 26201; (304)472-3704

Bob Gates, Box 5130, Charleston, WV 25361; photonzx@ntelos.net.

George Beetham, geobeet@hotmail.com

Bill McNeel, 1118 Second Ave., Marlinton, WV 24954, (304)799-4369; wpmcneel@gmail.com

Peter Shoenfeld, HC 70, Box 553, Davis, WV 26260, (304) 866-3484, (301) 642-2820; PShoenfeld@gmail.com

DIRECTORS-AT-LARGE (Terms expire October 2011)

Bob Henry Baber, 207 Howard St., Glenville, WV 26351, (304) 462-0320, mayorbobhenrybaber@yahoo.com

Dave Fouts, HC 80, Box 993, Maysville, WV 26833, (304) 749-8172, foutsberg@citlink.net

Larry Thomas P.O. Box 194, Circleville, WV 26804, (304) 567-2602, larryvthomas@aol.com

Carter Zerbe, 16 Arlington Ct., Charleston, WV 25301, (304)343-3175; scz3667@aol.com

Mike Withers, Rt 2, Box 328, Grafton WV 26354, 304-265-3750, 1nastynash@comcast.net

### ORGANIZATIONAL DIRECTORS

NATIONAL SPELEOLOGICAL SOCIETY: Robert (Bob) Handley, HC 67 Box 508 Renick, WV, 24966 497-2266; leatherwing@frontiernet.net

PITTSBURGH CLIMBERS: Jean Rodman, 32 Crystal Dr., Oakmont, PA 15139, (412)828-8983; jeanrodman@verizon.net

BROOKS BIRD CLUB: Cindy Ellis, RR 1, Box 163, Red House, WV 25168 (304) 586-4135; cdellis@wildblue.net

MOUNTAINEER CHAPTER TROUT UNLIMITED: Chris Byrd, 292 Magnolia Ave., Clarksburg, WV 26301 Tel. (304) 622-3023 <cbyrd@ma.rr.com>

WEST VIRGINIA RIVERS COALITION: Don Garvin, P.O. Box 666, Buckhannon, WV 26201; (304) 472-8716; DSGJR@aol.com

FRIENDS OF THE LITTLE KANAWHA: Cindy Rank, HC 78, Box 227, Rock Cave, WV 26234, (304)924-5802; clrank@hughes.net

TEAM (Taylor Environmental Advocacy Membership): Beth Baldwin, Grafton, WV 26354, 304-265-3029, elbrn6e21@msn.com

### COMMITTEE CHAIRS

MINING COMMITTEE: Cindy Rank, HC 78, Box 227, Rock Cave, WV 26234, (304)924-5802; clrank@hughes.net

PUBLIC LANDS MANAGEMENT COMMITTEE: Marilyn Shoenfeld, HC 70, Box 553, Davis, WV 26260, (304) 866-3484, (301) 642-2820; Marilyn.Shoenfeld@gmail.com

LEGISLATIVE COMMITTEE: Frank Young, Rt. 1, Box 108, Ripley, WV 25271, (304)372-3945; fyoung@mountain.net

WIND ENERGY COMMITTEE: Peter Shoenfeld, HC 70, Box 553, Davis, WV 26260, (304) 866-3484, (301) 642-2820; PShoenfeld@gmail.com

ENDOWMENT FUND COMMITTEE: John McFerrin, 114 Beckley Ave., Beckley, WV 25801, (304)252-8733; johnmcferrin@aol.com

RIVERS COMMITTEE: vacant

HIGHWAYS COMMITTEE: Hugh Rogers, Moon Run, Kerens, WV 26276, (304)636-2662; hugh.rogers@gmail.com

OUTINGS COMMITTEE: Dave Saville, PO Box 569, Morgantown, WV 26507, (304)284-9548; daves@labyrinth.net

### MISCELLANEOUS OFFICES

SPEAKERS BUREAU: Julian Martin, 1525 Hampton Road, Charleston, WV 25314, (304) 342-8989; martinjul@aol.com

WEB PAGE: Peter Shoenfeld, HC 70, Box 553, Davis, WV 26260, (304) 866-3484, (301) 642-2820; PShoenfeld@gmail.com and Jim Solley, jmessolley@comcast.net

### ADMINISTRATIVE OFFICES

ADMINISTRATIVE ASSISTANT: Beth Little, HC 64, Box 281, Hillsboro, WV, 24946 (304) 653-4277; blittle@citynet.net

HIGHLANDS VOICE EDITOR: John McFerrin, 114 Beckley Ave., Beckley, WV 25801, (304)252-8733; johnmcferrin@aol.com

(Continued on p. 7)

## MORE ABOUT NORTH FORK MOUNTAIN (Continued from p. 1)

proposed, the protections offered by wilderness designation are nothing short of significant. With a regional boom in destructive natural gas development, among other threats, preservation of our threatened wild places is as important as ever. Wilderness provides the strongest protection available to federal public lands, and North Fork Mountain absolutely deserves preservation.

The area offers a unique opportunity to experience one of the most unusual, ecologically diverse, places in the West Virginia highlands. North Fork Mountain hosts many rare plant communities and provides important wildlife habitat for several species of concern. The cliffs atop North Fork Mountain have served as a nesting site for the threatened Peregrine Falcon, and multiple species of endangered bats call the area home. The views from North Fork Mountain have been called the "best scenery in the east" by Outside Magazine, and Backpacker Magazine has labeled the North Fork Mountain Trail the "most scenic trail in West Virginia".

Contrary to the misguided claims of some wilderness opponents, the Monongahela Conservation Legacy Act represents a solid legislative proposal. In a recent hearing before a congressional subcommittee, supportive testimony was provided by the West Virginia Council of Churches, conservationists, sportsmen and local business owners. The Forest Service testified that the agency does not oppose the legislation, which was drafted with various user groups and managing agencies in mind.

A true champion of our state's public lands, Representative Mollohan deserves a tremendous amount of gratitude for his effort to preserve yet another special piece of West Virginia's natural, mountain heritage.



North Fork Mountain Photo © Brent Rowley

### LISTEN UP! IMPORTANT ANNOUNCEMENT

The West Virginia Highlands Conservancy will hold its annual meeting at 9:30 a.m. on Sunday, October 24, 2010, at the Country Road Cabins near Hico, WV.

Hico is on US 60, just west of its intersection w/ US 19 (Corridor L) and a few miles north of the New River Gorge Bridge. From [wvcabins.com/site/location](http://wvcabins.com/site/location), you can download a map and print out directions. From the north, it is I-79 S to Exit 57, US 19 S approx. 45 mi., exit on US 60 W, go 300 ft. to a right turn on Sunday Road (opposite New River Exxon convenience store). From the south, it is easier to go up I-79 to Exit 57 and follow the directions above. For more scenery, more time, more birds, and more adventure, take Route 60 all the way from Charleston, through Gauley Bridge, over the mountain, past the Mystery Hole and the Hawks Nest tunnel. More fun but not recommended for those who just want to get there.

The check-in cabin is up the road on the right, and the cabins are a mile or so further on.

The annual meeting will include the election of officers as well as at large Board members as well as any other business that may come before the meeting.

Immediately following the annual meeting will be quarterly Board meeting. All members are welcome at the Board meeting and are free to take part in the discussion although only Board members may make motions and vote.

At 3:30 p.m. on Saturday, October 23, many Board members and others who may be interested will meet at the cabins for an informal discussion of not just a specific project, mine, windfarm, etc. but of energy policy in general. Many Board meetings have touched upon the topic but the Board usually has no time to do it justice. We are going to take a crack at it outside a regular meeting. Any member who wishes to join in is welcome.

*The Highlands Voice* is published monthly by the West Virginia Highlands Conservancy, P. O. Box 306, Charleston, WV 25321. Articles, letters to the editor, graphics, photos, poetry, or other information for publication should be sent to the editor via the internet or by the U.S. Mail by the last Friday of each month. You may submit material for publication either to the address listed above or to the address listed for Highlands Voice Editor on the previous page. Submissions by internet or on a floppy disk are preferred.

*The Highlands Voice* is always printed on recycled paper. Our printer uses 100% post consumer recycled paper when available.

The West Virginia Highlands Conservancy web page is [www.wvhighlands.org](http://www.wvhighlands.org).

The West Virginia Highlands Conservancy is a non-profit corporation which has been recognized as a tax exempt organization by the Internal Revenue Service. Its bylaws describe its purpose:

The purposes of the Conservancy shall be to promote, encourage, and work for the conservation—including both preservation and wise use—and appreciation of the natural resources of West Virginia and the Nation, and especially of the Highlands Region of West Virginia, for the cultural, social, educational, physical, health, spiritual, and economic benefit of present and future generations of West Virginians and Americans.

# SUPREMES HEAR CASE ON GAS WELLS IN CHIEF LOGAN STATE PARK

By John McFerrin

On September 22, The West Virginia Supreme Court of Appeals heard arguments in the battle by the West Virginia Highlands Conservancy, the Friends of Blackwater and Cordie Hudkins (a retired Chief of the West Virginia State Park System in the West Virginia Division of Natural Resources) to prevent drilling for gas in Chief Logan State Park.

The main legal issue before the Court right now is about interpreting statutes and determining whether gas drilling may be allowed in state parks and how those statutes are to be enforced. In spite of this, the Justices didn't seem much interested in talking about that. Instead, they wanted to talk about whether prohibiting drilling in the park would be a taking of the property of the gas company that the state would then have to pay for.

Most of the lawyers said that the Court should just interpret the statutes and prevent drilling in the park. If the gas company then wanted to file suit alleging that it should be compensated for the taking it could do that in the future.

Although outcomes are unpredictable, for the most part, it appeared that the Justices went along with this.

At the close of the argument, one of the Justices complimented Tom Rodd (attorney for the West Virginia Highlands Conservancy, the Friends of Blackwater and Cordie Hudkins) on the quality of the written arguments he had submitted. Although not as good as unhorsing your opponent, being awarded two ears and a tail, etc. it is uncommon to receive such a compliment from the bench.

For the details of the case up to now, see the stories in the October, 2009, and July, 2010, issues of *The Highlands Voice*. In a nutshell, the Highlands Conservancy, Friends of Blackwater, and Mr. Hudkins oppose drilling for gas in Chief Logan State Park in Logan County. In a companion action, the Sierra Club also opposes it. Even the Department of Energy and the Division of Natural Resources oppose it.

Because Cabot Oil and Gas has a lease from the mineral owner (Lawson Heirs) to drill for gas on the Park, the Circuit Court in Logan approved the drilling. The Supreme Court is to decide whether the Circuit Court in Logan was correct.

The action would also affect all other state parks as well, potentially clarifying the law to make it clear that state law prohibits oil and gas drilling in state parks. This is significant not only for Chief Logan State Park but for the other parks where West Virginia does not own the mineral rights--Babcock, Blackwater Falls, Canaan Valley, Cedar Creek, Pipestem, Twin Falls and Watoga.



## THE RIGHT THING IN BLACKWATER CANYON

In mid-September, the Monongahela National Forest's decision on the Blackwater Canyon railroad grade became final: It will *not* turn into a logging road. Allegheny Wood Products (AWP), which owns from the midline of the grade downhill to the river, was granted an easement on the Forest Service side of the grade for the limited purpose of repairing damage and preventing further erosion, as well as for passage of emergency vehicles in case of personal injury or fire. The easement was conditioned on reciprocal access for the Forest Service *and the public* on its side of the grade.

AWP did not appeal. Nor has it communicated its intentions to the Forest Service. AWP had requested "full and regular access along the Road [*sic*]" for timber stand improvement, commercial thinning, pest management, and other tasks. Until it responds to this decision, the status quo will continue: the Forest Service won't manage the grade as a trail (it was FS Trail 115 from 1995 – 2003), the grade will continue to deteriorate, and those of us who hike, bike, or ski there will trespass if we cross the midline onto the south side of the grade.

From our point of view, Forest Supervisor Clyde Thompson and his staff made a brilliant decision—but they can't compel the landowner's agreement. It would seem to be in AWP's best interest to prevent the erosion that is damaging their property (both the "road" and the woodland below) and restore the grade for emergency use. It is certainly in the Forest Service's interest to make the grade safe and gain access to restore historic sites along it. And best of all, it is in the public's interest to gain legal access and protect the resource.

Supervisor Thompson credited "extensive public involvement" for shaping the final decision. More than 12,000 comments were received during this long controversy. These comments (a) elevated the level of consideration from an Environmental Analysis to a full Environmental Impact Statement (EIS); (b) refined and expanded the issues to be addressed; (c) contributed scientific and other factual information; (d) lent additional weight to the public interest in recreation and heritage sites; and (e) prompted development of an Alternative 4, which was the alternative chosen.

If you want proof that responding to action alerts—and persevering at every stage—can be effective, here it is.

When we began this struggle, the Forest Service's main concern was granting access to land-locked private property. Federal law does require such access; but the law also requires consideration of public safety, environmental impact, and any public benefit. Many commenters pointed out that AWP could, and did, reach its woodlands by other routes, specifically the helicopter logging it did in 1999, and the bridge it used for further logging in 2009. That lightened their side of the scale. On the other side, we persuaded the Forest Service that use of the grade for logging would adversely affect its character and use by the public.

If AWP consents to the reciprocal easement, the Forest Service is willing to do all the repair work. That would take the grade out of limbo and back into maintenance as Trail 115. The historically significant stone culverts over Tub Run and Big Run would be preserved. Even before that great day, we have good reason to congratulate Supervisor Thompson and his staff—and pat ourselves on the back.

You can find the Final EIS and Record of Decision at [www.fs.fed.us/r9/mnf](http://www.fs.fed.us/r9/mnf).

# CONSIDERATIONS OF DRILLING IN KARST

By Beth Little

Prepared for 09/01/10 WV Department of Environmental Protection Stakeholders meeting

Surface water enters groundwater systems rapidly as it passes through fractured bedrock under thin layers of permeable soil. Groundwater in karst areas can travel as quickly as a few thousand feet to over a mile per day. If surface water is polluted, the groundwater, including wells and springs over several miles, also may become polluted, and sensitive habitats may no longer support sensitive cave species. Those characteristics of karst ecosystems make the surface/groundwater environment fragile and highly susceptible to human disturbance.

Caves contain significant resources related to biology, geology, hydrology, archeology, paleontology, recreation, and scenery. Cave environments, by their very nature, provide unique, closed systems that are valuable for scientific study and environmental education of underground resources and the interrelationship between surface and subsurface. Potential hazards to cave/karst resources and surrounding communities may result from the following natural gas activities:

1. Contaminants such as lost drilling fluids as well as hydrocarbons from spills or leaks (including floods) from well casings, storage tanks, reserve pits, pipelines, and production facilities that may enter into the cave/karst systems;
2. Cements escaping into voids which may restrict groundwater flow and introduce pollutants;
3. Vented or escaped gases, collecting in sinkholes and caves. These gases can cause a die-off of plant and animal life that use the special habitat created by the microclimate of the cave entrances or sinkhole. Some cave systems in the Greenbrier Valley extend for miles under thousands of acres below homes, building and towns. An explosion touched off by cavers with carbide lamps or other source of ignition could result in major loss of life and property. There is not only a explosion hazard but also an asphyxiation hazard to the lucky homeowner, business owner, customer or caver;
3. Increased soil erosion from gas development activities (i.e., well pads, roads, etc); and
4. Corrosion of the casing strings.

Caves are "known" openings in the limestone that have a person sized connection to the surface so they can be entered and explored. In karst areas, for every "known" cave there could be literally hundreds or thousands more - number, feet, miles - of "unknown" passage that has no connection to the surface or has not been discovered. Water well drillers have hit as many as eight voids on their way through the karst. So when gas drilling companies say they will stay away from "known" caves they are whistling in the dark.

When asked about drilling through karst, gas drillers tend to respond like its the same as hitting an abandoned mine passage - they say they just keep drilling and then double case the void so it is sealed and then continue drilling below it. In karst - and in WV - there are MANY cave passages that are over 50 ft in height - and MANY

over 100 ft.....the largest underground continuous vertical drop in WV is 350 ft in a cave in Pendleton County. So one question is how do you drill and case something over 30-40 ft in height? Another is how do you drill and case through 8 successive voids.

Another difficulty in drilling through a karst void that increases the likelihood of problems with casing integrity is that the bottom of the cave often consists of large boulders making it extremely difficult to begin drilling in a spot that is directly under the hole entering the void, resulting in a casing that is not straight.

The integrity of the casing is vital in preventing leaks, and minor flaws may not become an issue until time has passed. Because natural gas has no odor until odor is added, there would be no warning of a buildup of gas in a karst area.

Some may argue the gas will stay fuel rich (non-flammable) underground due to lack of oxygen or displacement of air from the cave. Movement of air through caves makes this unlikely. Caves have air the same as the surface - and they breathe - suck in when high pressure weather system moves through the area and blow out when lower pressures weather system moves through the area. High entrances tend to suck air and lower entrances blow air during summer due to bouyancy effects.

In summer, "cold" cave air is heavier and flows out lower entrances - causing a slight negative pressure in the cave which causes upper entrances to suck air in to replace that which flows out the lower entrances. In winter the process reverses - now warm cave air is lighter than outside air and pours out upper entrances, the lower entrances then pull in surface air to replace. So caves are always exchanging air with surface - bringing fresh air with oxygen to make flammable mixture. Also any gas in the cave will be pulled out and to the surface with the cave air exchanged making it more likely to find an ignition source - a passing car, tractor, lightning..... someone lighting a cigarette in their living room.



## Join Now !!!

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Phone \_\_\_\_\_ E-Mail \_\_\_\_\_

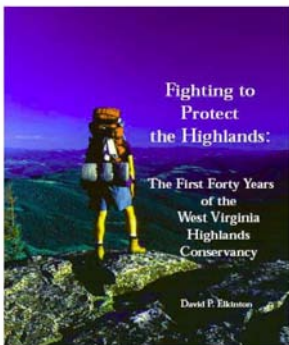
**Membership categories (circle one)**

	Individual	Family	Org
Senior	\$ 15		
Student	\$ 15		
Introductory			
Other	\$ 15		
Regular	\$ 25	\$ 35	\$ 50
Associate	\$ 50	\$ 75	\$ 100
Sustaining	\$100	\$ 150	\$ 200
Patron	\$ 250	\$ 500	\$ 500
Mountaineer	\$500	\$ 750	\$ 1000

Mail to West Virginia Highlands Conservancy PO Box 306 Charleston, WV 25321

**West Virginia Highlands Conservancy**  
**Working to Keep West Virginia Wild and Wonderful!**

### GREAT HISTORY BOOK NOW AVAILABLE



For the first time, a comprehensive history of West Virginia's most influential activist environmental organization. Author Dave Elkinton, the Conservancy's third president, and a twenty-year board member, not only traces the major issues that have occupied the Conservancy's energy, but profiles more than twenty of its volunteer leaders.

Learn about how the Conservancy stopped road building in Otter Creek, how a Corps of Engineers wetland permit denial saved Canaan Valley, and why Judge Haden restricted mountaintop removal mining. Also read Sayre Rodman's account of the first running of the Gauley, how college students helped save the Cranberry Wilderness, and why the highlands are under threat as never before.

With a foreword by former congressman Ken Hechler, the book's chapters follow the battle for wilderness preservation, efforts to stop many proposed dams and protect free-flowing rivers, the 25-year struggle to save the Canaan Valley, how the Corridor H highway was successfully re-routed around key environmental landmarks, and concluding with the current controversy over wind farm development. One-third of the text tells the story of the Conservancy's never-ending fight to control the abuses of coal mining, especially mountaintop removal mining. The final chapter examines what makes this small, volunteer-driven organization so successful.

From the cover by photographer Jonathan Jessup to the 48-page index, this book will appeal both to Conservancy members and friends and to anyone interested in the story of how West Virginia's mountains have been protected against the forces of over-development, mismanagement by government, and even greed.

518 pages, 6x9, color cover, published by Pocahontas Press  
 To order your copy for \$24.95, plus \$3.00 shipping, visit the Conservancy's website, [wvhighlands.org](http://wvhighlands.org), where payment is accepted by credit card and PayPal.

Or write: WVHC, PO Box 306, Charleston, WV 25321. Proceeds support the Conservancy's ongoing environmental projects.

### SUCH A DEAL!

#### Book Premium With Membership

Although *Fighting to Protect the Highlands, the First 40 Years of the West Virginia Highlands Conservancy* normally sells for \$24.95, we are offering it as a premium to our members. Anyone who adds \$10 to the membership dues listed on the How to Join membership form (right up there ) will receive the history book for free. Just note on the membership form that you wish to take advantage of this offer.

This offer is available to current members as well as new members. Current members may add \$10.00 to the amount they pay when they renew their memberships and receive a book as well.

### Voice Available Electronically

*The Highlands Voice* is now available for electronic delivery. You may, of course, continue to receive the paper copy. Unless you request otherwise, you will continue to receive it in paper form. If, however, you would prefer to receive it electronically instead of the paper copy please contact Beth Little at [blittle@citynet.net](mailto:blittle@citynet.net). Electronic copies arrive as e-mail attachments a few days before the paper copy would have arrived.

# INDEPENDENT SCIENCE ADVISORY BOARD DRAFT REVIEW SUPPORTS EPA SCIENCE ON MOUNTAINTOP MINING IMPACTS

On September 28, the U.S. Environmental Protection Agency's (EPA) independent Science Advisory Board (SAB) released their first draft review of EPA's research into the water quality impacts of valley fills associated with mountaintop mining. In their draft review, the Science Advisory Board supports EPA's scientific research and agrees with EPA's conclusion that valley fills are associated with increased levels of conductivity (a measure of water pollution for mining practices) in downstream waters, and that these increased levels of conductivity threaten stream life in surface waters.

"This independent review affirms that EPA is relying on sound analysis and letting science and only science guide our actions to protect human health and the environment," said EPA's Assistant Administrator for Water Pete Silva. "We will continue to follow the science and solicit input from all stakeholders as we safeguard water quality and protect the American people."

The Science Advisory Board reviewed EPA's draft report "A Field-Based Aquatic Life Benchmark for Conductivity in Central Appalachian Streams," which uses field data to derive an aquatic life benchmark for conductivity. The benchmark is intended to protect 95 percent of aquatic species in streams in the Appalachian region influenced by mountaintop mining and valley fills. Based on that science, EPA released guidance in April designed to minimize irreversible water quality impacts caused by mountaintop mining.

Following the completion of the external peer review and review of public comments, the report will be revised and published as a final report.

A growing body of scientific literature, including previous and new studies performed by EPA, show significant damage to local streams that are polluted with the mining runoff from mountaintop removal. To protect water quality, EPA has identified a range of conductivity (a measure of the level of salt in the water) of 300 to 500 microSiemens per centimeter that is generally consistent with protecting life in Appalachian streams. The maximum benchmark conductivity of 500 microSiemens per centimeter is a measure of salinity that is roughly five times above normal levels.

Otter Creek addition—and he had many other things to do in his last term.

Highlands Conservancy members who don't live in the First District may not be aware of Alan Mollohan's long-time attention to public lands, the Canaan Valley National Wildlife Refuge as well as the Monongahela National Forest. His efforts to protect the Blackwater Canyon have been ardent and effective. He was well aware of changes in the Forest's Management Plan that took some former "6.2" areas out of that protective classification, and the increasing pressure on the Forest to lease its mineral rights.

We'd come very close to including North Fork Mountain in last year's legislation, but several issues had remained unresolved. As we consulted state agencies, local landowners, business proprietors, mountain bikers, and other interested parties, Rep. Mollohan played a strong role in getting it done.

North Fork Mountain is worth all the work. Although the area has been reduced from more than 9,000 acres to just over 6,000 acres, the wilderness still protects the prime peregrine falcon nesting area as well as habitat for rare plant species. It has the Forest Service's highest rating for natural integrity. (The Service did not oppose wilderness designation at the hearing on the bill before the House Natural Resources Committee.) The new boundary allows trout stocking to continue all along the North Fork, and it preserves a loop ride for bikers that's one of the best in the East.

Of course Representatives expect to be attacked, left and right, for all sorts of reasons. Rep. Mollohan, though, was caught off guard by slurs that appeared in a paper published by an organization he'd worked with for years. When the topic is controversial it can be a difficult line to draw. In this case, if the name-calling were removed there wouldn't be much left of the article.

Mr. Gray wants to have it both ways: North Fork Mountain shouldn't have any wilderness at all, and the whole mountain should be included. And again: wilderness won't protect the area from gas drilling, and yet it will encourage more drilling on nearby private land.

According to Mr. Gray, the fact that Otter Creek Wilderness is at risk of oil and gas exploitation proves that the North Fork Mountain Wilderness will be similarly vulnerable. But the federal government never owned the minerals under most of Otter Creek; those property rights were severed when the land was acquired in 1915. The minerals under North Fork Mountain are federal property and wilderness designation will permanently protect them from exploitation.

There's nothing else in the article to refute, but much about its method to regret.

**Leave a Legacy of hope for the future**  
Remember the Highlands Conservancy in your will. Plan now to provide a wild and wonderful future for your children and future generations. Bequests keep our organization strong and will allow your voice to continue to be heard. Your thoughtful planning now will allow us to continue our work to protect wilderness, wildlife, clean air and water and our way of life.

# FOLK COMES FACE TO FACE WITH MARCELLUS

By Cindy Rank

## We had no idea.

Visiting wood sculptor Wolfgang Flor and his family late in December 1971, spending a warm early winter night in a cave back in the hollow and the next day walking what would become our hillside homeplace, Paul and I had no idea what life had in store for us the next 40 years.

But here we are fully ensconced in our (for the most part) owner built home among the West Virginia hills with a wealth of experiences behind us and looking ahead with a bit of trepidation about what still lies ahead.

Moving from Pittsburgh and our positions at Duquesne University we spent a glorious half dozen years of discovery and building and gardening and crafting. Then the core drilling trucks came up and down our narrow roads exploring for coal and we learned just what it meant to own the surface of our property with our nearest neighbors the people and companies that owned the minerals beneath us.

With other concerned citizens in southern Upshur County, WV along the headwaters of the Little Kanawha River, we became FOLK (Friends of the Little Kanawha) and began our watchdog efforts that continue to this day.

The threat of Acid Mine Drainage from proposed mining in our area was the motivating force for our joining with the West Virginia Highlands Conservancy (WVHC) in 1979.

Subsequent to extended legal battles and the withdrawal of the proposed mining permits, the Little Kanawha and our communities that are nurtured by her were visited by the gas drilling boom of the early 1980's. Thirty years later access roads still run muddy and pit waste is buried at numerous well sites from that era.

Today we are facing an even more formidable challenge from the gas industry as drilling into the Marcellus Shale is rampant. To date some 118 permits have been granted for Marcellus wells in Upshur County, most are for horizontal wells and many are concentrated in the southern part of the County, home to the headwaters of the Little Kanawha River.

My own experiences and those of other members of the Conservancy prompted me to speak at the hearing in Canonsburg, PA and to write at least a few basic comments about concerns that should be included in the much needed study the Environmental Protection Agency (EPA) is undertaking re: impacts of

hydraulic fracturing on drinking water. What follows is an adapted overview of some of those concerns.

## The Process

Without repeating too many details about the drilling process, suffice it to say that bore holes over 7,000 feet deep and another 3-4,000 feet pushed horizontally through the tight Marcellus Shale formation are not the gas wells we were so concerned about in the early 1980's.

Fracturing the shale requires injecting at high pressure enormous amounts of fresh water (some 4.5 million gallons per well here in southern Upshur) mixed with chemicals and sand to break apart the rock and hold it open to allow the release and flow of gas to the wellhead on the surface.

Something like one third to one half of the frac fluid returns to the surface as flowback waste water to be disposed of. Carrying with it not only the chemicals that were part of the frac water to begin with but also brines and some naturally occurring radioactive materials, disposal of the waste water is particularly troublesome.

Drill pads are often five times larger than those for traditional wells and can be used for six, eight and even ten individual well bores only 15 feet or so apart. On the one hand the footprint of such an arrangement is far better than having many, many more vertical wells and many more smaller well pads scattered all over the place. But the footprint of one of these larger individual pads is overwhelming for the surface owner where it's located and truly impacting, especially when it's carved out of a hillside.

In addition to concerns about the drilling and fracing process itself, the hundreds and hundreds of trucks and heavy equipment travelling our roads daily, the noise and air emissions, and the additional compressor stations and pipelines needed to move the gas are changing the complexion of many of our small communities – including Holly Grove at the headwaters of the Little Kanawha which was the bulls eye threatened by the proposed mining we fought back in 1979.

## Water Withdrawals

This spring and summer – as in 2009 – weather was exceptionally dry and streams quite low. Even without the enormous amounts of water taken for fracturing Marcellus wells in the area the headwaters of the Little Kanawha were stressed.

Those of us who depend directly on streams for our drinking water or on springs

or water wells into shallow aquifers often hydrologically connected to those surface waters usually adjust to the low flow dry conditions of late summer, but we can't compete with the demands of such a water thirsty industry drawing on those resources at the same time.

Despite improvements to its water withdrawal tool which is meant to help guide industry to streams with adequate flow, and even with its introductory cautionary language to drilling companies to take great care when considering withdrawals, WV DEP guidance is a far cry from what is needed. West Virginia is ill prepared for this drain on our waters - especially our tiny headwater streams where much of the drilling is taking place, and is woefully lacking in legal means to control or constrain overuse.

## Disposal of Wastewater

With only a couple of treatment facilities available to manage the enormous amounts of chemically laced, brine laden wastewater from all the drilling sites and only a handful of underground injection wells approved to accept the water, mistakes have been made and waters impaired where municipal treatment systems which were unprepared to treat the brine have accepted the waste water and discharged it into rivers and streams. Dilution became the (often unsuccessful) 'treatment' of choice. This practice has been curtailed and some companies are reusing their own flowback frac water to frac at successive drill sites, but as I understand it there is a limit to the number of times that water can be reused.

I cringe to think and refuse to accept that we've returned to the days of "dilution is the solution to pollution", but right now we're between a rock and a hard place when it comes to managing the water needed for hydraulic fracturing of the deeper shales being developed today. The fracturing process itself is not new, but the scale of these operations, the application of the process to these horizontal wells is.

## Industry Claims

Stories from residents all across the country where shale gas is being drilled tell of water and health related problems that curiously occur at the same time deep drilling and hydraulic fracturing is taking place in their communities. These experiences – including many from the Marcellus fields of Pennsylvania, New York and West Virginia – have been well documented and appear to



## MORE ABOUT MARCELLUS (Continued from p. 8)

believe industry claims that this drilling is safe and causes no direct impacts.

There is no need for me to repeat the hundreds – perhaps thousands, of incidents that have been conveyed to EPA at public hearings held as part of the agency's two year study of the impacts of hydraulic fracturing on drinking water. Headline and front page articles continue to appear in the media all across the country.

I mention but one basic industry assumption that must be questioned by EPA. One reason industry often gives to support its claims about this drilling as being safe is that the Marcellus is located at such great depths and is covered by substantial rock formations that effectively contain any fracturing to the target shale itself. When people suggest there could be other conduits that might effectively allow infiltration of gas or other pollutants into groundwater and more shallow aquifers and water wells, industry shifts to explanations about great casing and good cementing and regulatory agencies watching over such activities.

One counter to that argument is found in comments submitted to EPA by the WV Surface Owners Rights Organization ([www.wvsoro.org](http://www.wvsoro.org)) that clearly illustrate the possibility of infiltration of gas and other contaminants due to the presence of old unplugged and abandoned gas wells as well as the inability of the regulatory agency to oversee all the activity past and present. It's ludicrous to think 15 or 17 gas inspectors can cover the entire state of WV where thousands of wells are in the process of being drilled. Other states are in similar situations.

As suggested by WV SORO, an essential first step in this EPA review should be an evaluation of the efficacy of these state regulatory programs, the reliability of industry's casing and cementing processes to date, the existence of older abandoned or unknown wells, and how these and other threats to groundwater from the oil and gas exploration and production might directly or indirectly relate to recent incidents of ground and drinking water impacts reported throughout the shale drilling regions.

One particular concern that wasn't directly addressed in the many fine and detailed comments submitted to the EPA by Waterkeeper Alliance, Earthworks, Earthjustice, and other groups was the potential impact of drilling in geologically sensitive areas such as Karst. This is an important consideration throughout eastern portions of West Virginia and I would be remiss not to mention it on behalf of our WVHC members who live in Greenbrier, Monroe, Pocahontas

and the eastern panhandle counties. (Beth Little has addressed this more fully in another article elsewhere in this issue of the Voice.)

Cumulative Impacts/ Concentrated Activities  
Of particular concern is the potential impact from multiple wells drilled close to each other. Holly Grove, a small community in the Little Kanawha headwaters area, has been and is being drilled by multiple companies causing one member of the community to remark about the community being lit up like a Christmas tree at night. From water withdrawals (~4.5 million gallons for each frac), to truck traffic grinding apart minimally paved roads, turning them back to mud, stranding residents to a slew of water concerns, we and others are looking to EPA to conduct a thorough, scientific study that will lead to sound approach to this burgeoning industry.

The safety of Underground Injection of wastewater is also in question. The disposal of flowback and produced water and brines into underground injection wells in Braxton County and southern Upshur county has led to questions about the possible connection of that activity to several unusual tremors (noted as small earthquakes between 2.2 and 3.4 magnitude) in this normally geologically quiet part of West Virginia. [See <http://www.wvgazette.com/News/201008280386> August 28, 2010, **In Braxton, there's a whole lotta shakin' going on ....** Is gas drilling causing earthquakes? By Rick Steelhammer].

"There are no earthquakes to speak of in that part of West Virginia," said Martin Chapman, director of the Virginia Tech Seismic Observatory. "Earthquakes of the size recorded this year near Gassaway could happen naturally, but probably not so many, so close together. ... Something's going on there, and I have a strong suspicion that it's something associated with drilling. As more Marcellus wells are developed, I think we'll be seeing more of this happening in West Virginia.

"Injection in other parts of the country is believed to cause pressure conditions that can reactivate old, inactive fault lines and cause small earthquakes," said Michael Hohn, state geologist and director of the West Virginia Geological and Economic Survey."

### The Frosting on the Cake

Accompanying the drilling process itself, at least here in Upshur County, are attempts by industry to determine ahead of time just where some of the 'sweeter' pockets of Marcellus might be accessible.

In the early 1980's thumper trucks moved up and down the road shaking the earth to record via 2D seismic monitoring the

locations of gas pockets. In 2010 industry has advanced to employing 3D seismic techniques planned for an 80 square mile area in Upshur and Lewis Counties. The process involves blanketing the area with 20 foot deep shot holes drilled every 190 feet in parallel lines some 1,500 feet apart. The 2+lbs of ammonium nitrate will be set off one at a time to send signals to lines of cable and transistors strung perpendicular to the lines of blast holes. As each of the shots is set off equipment will record the depth and characteristic of the rock formations and all else that lies beneath the surface.

Following months of somewhat questionable tactics to gain access to properties where the companies may or may not hold leases to the gas beneath, hovering helicopters now strain the nerves of animals and humans alike as the 'copters lift and lower portable drilling rigs in leap frog fashion across fields and through the trees. We don't know yet what the actual blasts will be like, but preparations have already caused great heartburn. Chesapeake has even gone so far as employing Jackson Kelly law firm to send threatening letters promising to sue residents who refuse access to their property.

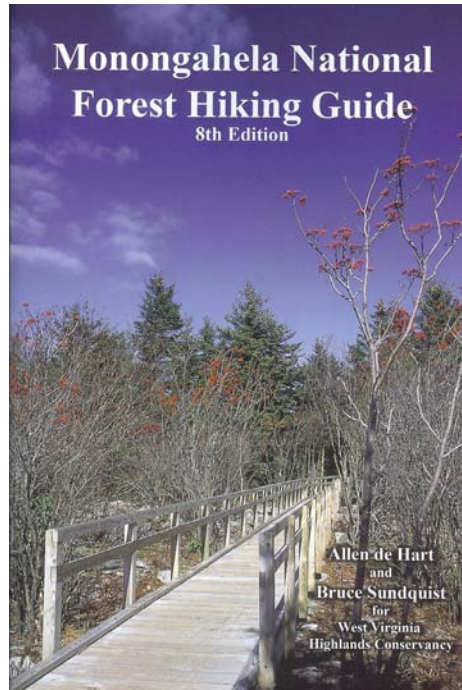
### Bottom line?

It's not mountaintop removal coal mining, but it ain't pretty and it's causing big problems here and elsewhere.

At this point in the process it seems legitimate to appropriate a sentiment from posters during the Vietnam War era: Marcellus drilling may not be healthy for children or other living things.

There are far too many questions and far too few answers, and far too little time to think ahead, know about, prepare for or even consider consequences as we run full speed ahead into this newest of the perhaps overly fantasized solutions for our ailing planet.

The EPA study is well intentioned but doesn't promise to provide the ultimate answer. State legislative action is needed [and will be written about extensively in future issues of the Voice] but won't resolve all the outstanding issues. Individuals need to be well informed to act wisely and yet the information is sparse and not easily accessible. ... But try to do something we must.



## The Monongahela National Forest Hiking Guide

By Allen de Hart and Bruce Sundquist

Describes 180 U.S. Forest Service trails (847 miles total) in one of the best (and most popular) areas for hiking, back-packing and ski-touring in this part of the country (1436 sq. miles of national forest in West Virginia=s highlands). 6x9" soft cover, 368 pages, 86 pages of maps, 57 photos, full-color cover, Ed.8 (2006)

Send \$14.95 plus \$3.00 shipping to:  
**West Virginia Highlands Conservancy**  
 P.O. Box 306  
 Charleston, WV 25321  
 OR  
 Order from our website at  
[www.wvhighlands.org](http://www.wvhighlands.org)

### New 8TH Edition Now Available on CD

WV Highlands Conservancy proudly offers an Electronic (CD) version of its famous Monongahela National Forest Hiking Guide (8th Edition), with many added features.

This new CD edition includes the text pages as they appear in the printed version by Allen deHart and Bruce Sundquist in an interactive pdf format. It also includes the following mapping features, developed by WVHC volunteer Jim Solley, and not available anywhere else:

- All pages and maps in the new Interactive CD version of the Mon hiking guide can easily be printed and carried along with you on your hike
- All new, full color topographic maps have been created and are included on this CD. They include all points referenced in the text.
- Special Features not found in the printed version of the Hiking Guide: Interactive pdf format allows you to click on a map reference in the text, and that map centered on that reference comes up.
- Trail mileages between waypoints have been added to the maps.
- ALL NEW Printable, full color, 24K scale topographic maps of many of the popular hiking areas, including Cranberry, Dolly Sods, Otter Creek and many more

Price: \$20.00 from the same address.

### T- SHIRTS

White, heavy cotton T-shirts with the **I♥Mountains** slogan on the front. The lettering is blue and the heart is red. "West Virginia Highlands Conservancy" in smaller blue letters is included below the slogan. Short sleeve in sizes: S, M, L, XL, and XXL. Long sleeve in sizes S, M, L, and XL. **Short sleeve** model is \$12 total by mail; **long sleeve** is \$15. West Virginia residents add 6% sales tax. Send sizes wanted and check payable to West Virginia Highlands Conservancy ATTEN: James Solley, WVHC, P.O. Box 306, Charleston, WV 25321-0306.



### Speakers Available !!!!!

Does your school, church or civic group need a speaker or program presentation on a variety of environmental issues? Contact Julian Martin at 1525 Hampton Road, Charleston, WV 25314, or [Martinjul@aol.com](mailto:Martinjul@aol.com), or 304-342-8989.

### Send us a post card, drop us a line, stating point of view

Please email any poems, letters, commentaries to the VOICE editor at [johnmcferrin@aol.com](mailto:johnmcferrin@aol.com) or real, honest to goodness, mentioned in the United States Constitution mail to WV Highlands Conservancy, PO Box 306, Charleston, WV 25321.



# West Virginia Mountain Odyssey



## Outings, Education and Beyond 🇺🇸

Saturday-Monday (or Tuesday), October 09 to 11 (or 13), 2010. Cooper's Rock State Forest, WV. Car Camping and Day Hiking. As of now this is a three day trip with an 8 mile circuit hike within the park to visit the Cheat River and a vista. It is possible this will be extended an extra day if more good hiking is close by. Pre-registration and campsite reservation is required. Contact Mike Juskelis at 410-439-4964 or [mjuskelis@cablespeed.com](mailto:mjuskelis@cablespeed.com).

Open Dates: Visit Kayford Mountain south of Charleston to see mountain top removal (MTR) up close and hear Larry Gibson's story about how he saved his mountain, now almost totally surrounded by MTR. Bring lunch for a picnic on Larry's mountain. Call in advance to schedule. Julian Martin (304) 342-8989; martinjul@aol.com or Larry Gibson (304) 542-1134; (304) 549-3287.

### HATS FOR SALE

We have West Virginia Highlands Conservancy baseball style hats for sale as well as I ❤️ Mountains caps.

The WVHC cap is beige with green woven into the twill and the pre-curved visor is light green. The front of the cap has West Virginia Highlands Conservancy logo and the words West Virginia Highlands Conservancy on the front and I ❤️ Mountains on the back. It is soft twill, unstructured, low profile, sewn eyelets, cloth strap with tri-glide buckle closure.

The I (heart) Mountains The colors are stone, black and red.. The front of the cap has I ❤️ MOUNTAINS. The heart is red. The red and black hats are soft twill, unstructured, low profile, sewn eyelets, cloth strap with tri-glide buckle closure. The stone has a stiff front crown with a velcro strap on the back. All hats have West Virginia Highlands Conservancy printed on the back. Cost is \$15 by mail. West Virginia residents add 6% tax. Make check payable to West Virginia Highlands Conservancy and send to Jaames Solley, P.O. Box 306, Charleston, WV 25321-0306



# WORRIES ABOUT MARCELLUS SHALE GAS DRILLING

By Beth Little

After trying to keep up with the overwhelming amount of information I receive daily about gas drilling, my main concern has become that there are critical questions going unanswered for lack of research and adequate monitoring. Some of these questions are about issues other than the water threats that have received most of the attention so far.

In Pennsylvania Dr Volz, of the University of Pittsburgh's Center for Healthy Environments and Communities, said that "While environmental groups and citizens scour lists of chemicals added to hydraulic fracturing fluid used to break up the shale formation, the greater threat may come from toxins that come to the surface as flowback. Flowback is a slurry that can contain naturally-occurring benzene, strontium and arsenic. It is often stored in uncovered fracking ponds where volatile organic compounds (VOCs) evaporate into the air. Condenser stations, wells and pipelines also discharge VOCs. VOCs emitted by a single well pad may not be that significant, but as drilling intensifies, air quality will become an issue."

Air quality is already an issue in Wetzel Co, where there are many gas wells being drilled as well as pipelines and proposed compressor stations. Folks there are experiencing deteriorating air quality. Unfortunately, neither the DEP Dept of Air Quality nor the DEP Office of Oil & Gas do any monitoring or regulating of air quality at gas wells. The Wetzel Co Action Group is requesting that the DEP start monitoring immediately in order to set some baselines, since there are daily increases in emissions.

Air contamination – specifically the production of ozone – is what worries Ken Jaffe, a farmer in Meredith, NY. When excess methane gas, coupled with volatile compounds like benzene, toluene and xylene, are released into the air in a process the gas industry calls "venting," it can inhibit lung function and wreak havoc on plant life.

Another issue with unanswered questions is naturally occurring radioactive materials or NORMs. Red flags about this were raised when the soil in the Fernow Experimental Forest where drilling wastewater was sprayed tested surprisingly high in lead. (The testing was done because all the vegetation in the spray area, including large trees, died within days). Lead is what radioactive substances decay into.

Then I read an article reporting that New York's Department of Environmental Conservation analyzed 13 samples of wastewater brought thousands of feet to the surface from drilling and found that

they contained levels of radium-226, a derivative of uranium, as high as 267 times the limit safe for discharge into the environment and thousands of times the limit safe for people to drink.

A report from Cornell University states that "The Marcellus shale is considered to be "highly radioactive." As the Marcellus shale is developed it will be important to understand the radioactivity of the various waste streams that are produced (e.g., returning water, gas, pit/tank sludge and drill cuttings). During drilling there may be a large volume of radioactive shale rock removed in the drill cuttings, especially from horizontally drilled wells."

Radioactivity is dangerous even at low levels because the emitted particles can cause damaging mutations in the DNA of cells. If the damage occurs to genes regulating cell division the result can be uncontrolled cell growth, producing cancer. Radioactivity cannot be seen, felt or otherwise detected by humans without special instruments, but can nonetheless be extremely damaging. There is no safe level of radioactivity, as damage is proportional to dose, and exposure is cumulative.

So, are there NORMs in the Marcellus wells being drilled in West Virginia? The answer is that nobody knows. The Marcellus Shale Committee funded a study last year with the Gas Technology Institute to analyze flowback fluid samples from 19 wells. The report came out in December, but they did not report any NORM values because the high total dissolved solids in the samples prevented proper analysis of radionuclides.

To measure radionuclides, the water has to be filtered a certain way to separate and concentrate them and there is currently no funding for this research.

It would be nice if our Department of *Environmental Protection* would require answers to these questions before permitting hundreds of Marcellus wells that could have severe consequences to our health. But that's not the way it works. It is one of the sad facts in West Virginia that profits take precedence over health. Never mind that medical bills might eventually consume all the profits realized in the short term. As long as our government leaders receive increased revenue from taxes or campaign contributions, they will side with the short term gains to be made over long term consequences. At least until we get smart and stop electing them.

This election season is an opportunity to ask candidates if they are willing to stand up to industry and pass legislation to protect our water, our air and our health.

## BUMPER STICKERS

To get free *I ♥ Mountains* bumper sticker(s), send a SASE to Julian Martin, 1525 Hampton Road, Charleston, WV 25314. Slip a dollar donation (or more) in with the SASE and get 2 bumper stickers. Businesses or organizations wishing to provide bumper stickers to their customers/members may have them free. (Of course if they can afford a donation that will be gratefully accepted.)

Also available are the new green-on-white oval *Friends of the Mountains* stickers. Let Julian know which (or both) you want.



WEST VIRGINIA HIGHLANDS CONSERVANCY, PO BOX 306, CHARLESTON, WV 25321-0306 • www.wvhighlands.org



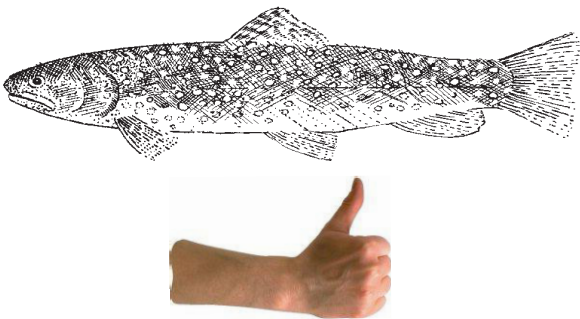
# “RECLAIMING” TROUT STREAMS WITH TOXICANTS

By Don Gasper

In the cool flows of the original forest, the downstream end of trout streams remained free of the warmer water minnows (creek chubs, cottus, dace and darter) found there today. With human induced changes, the downstream ends of trout streams became warmer and were invaded by warmer water minnows. Now that there has been regrowth, it may be possible to establish these stretches as trout only stream. The process of establishing these stretches as trout only is called “reclamation” because it reclaims the segment for trout only.

One tool for achieving this “reclamation”

**Trout**



is the use of poisons, called toxicants, to eliminate these predator/competitors. This can restore this lower reach to the original “trout only” status. All the stream’s productivity would then be channeled into brook trout in these lower reaches, where a larger, more resilient, population would develop. Its standing crop of fish (productivity at that instant) may still only be about fifteen pounds per acre (15 lbs. /ac.) but it will all be brook trout. The use of a fish toxicant does also affect aquatic insects

There has been a recent February 2010 report in the American Fisheries Society literature about the use of fish toxicants. As a part of this comprehensive cautionary review, its use in small trout streams was covered. It is suggested that the extreme headwaters were not to be treated but left to repopulate the stream below, and a neutralization product be used at the downstream end of the treated reach. West Virginia and most agencies do this.

I want our fish managers and the public to be aware of the process and benefits of one such project.

Over 30 years ago, I was in charge of fish management on the Monongahela National Forest, and carried out such a project. Though I had consultation and approval of this from everyone, and the assistance of perhaps six fish biologists, in the implementation of this “reclamation” - there was no environmental impact statement.

There were, in the 1960’s, two other reclamation projects, above barriers, that would prevent the warmer-water minnows from reinvading the reclaimed reach. Insects and new trout reproduction were always abundant the following spring. These formed a strong year class that was apparent for several years.

On Big Run, of the North Fork, of the South Branch, of the Potomac that drains Spruce Knob, there was no barrier falls. However, just below Elk Run, the ledge rock bottom sloped and dropped about four feet. Here, we blasted with dynamite enough to get a straight drop to form a barrier. The fish population here included not only the species above but white sucker and even the American eel.

Before treatment began, about three hundred brook trout, ranging four to eight inches were captured from the reach to be reclaimed. They were placed in the wildlife manager’s pond for a month in August and then returned, with some scattering, to the detoxified stream by the first day of September.

Three foot wide headwater tributaries have only brook trout. Treatment began just below them. The toxicant application, in the 8 mile reach to be reclaimed took about two days. The project began in the low flows of August 1. The headwater was treated first. Every bit of it, below “brook trout only” water, was sprayed by Indian backpack fire pumps. It took about six of these to reach the headwaters.

On day two, the four foot wide

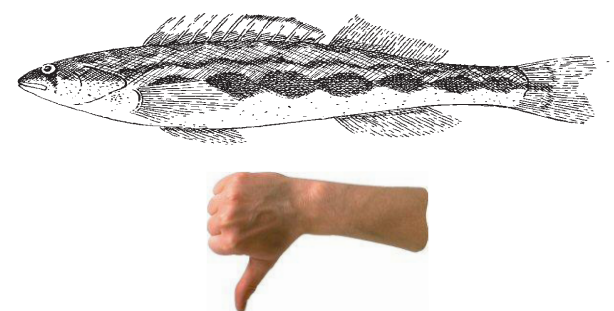
tributary, just below Shot Cherry Cabin, was discovered to have five beaver dams on it and had to be redone. However, our group of three was enough to spray the main stream. All side flows and isolated pools were turned white with toxicant (rotenone). We proceeded to the falls that had been blasted below Elk Run. As Elk Run was a strong source of brook trout in the lower part of Big Run, Elk Run was treated only in its lower quarter mile.

At the barrier fall, live boxes with cottus, dace and trout were placed at three places about one thousand feet apart. Our efforts to detoxify the flow with potassium permanganate were successful. The calculations were made - but the spreading of the toxicant, at the concentration needed, made it more inexact. One quart of rotenone was mixed with about five gallons of water in the Indian backpack pump and another quart was put in a plastic bottle, inside, for a refill.

The rotenone product, which was used also in our lake surveys, was reported to detoxify on its own, in about two days, at 70 degrees Fahrenheit. The detoxification drip station was maintained for a week and there were no live box mortalities.

“Reclamation,” with a fish toxicant, is an important part of efforts to establish brook trout strongholds and extend “trout only” reaches downstream and then connect isolated populations. It is only effective above a barrier because this lower reach, though now habitable by brook trout, is no cooler and will quickly be dominated again by warm water minnows. Barriers are essential to the reclamation of the lower reaches of brook trout streams.

**Darter**



## The Way the Voice Works

*The Highlands Voice* is the official publication of the West Virginia Highlands Conservancy. While it is the official publication, every story in it does not represent an official position of the Conservancy. While all of our members share the general goal “to promote, encourage, and work for the conservation—including both preservation and wise use—and appreciation of the natural resources of West Virginia and the Nation”, our members often have differing views upon the best way to do that.

As a result, stories in *The Voice* often reflect different points of view. The Conservancy itself, however, only speaks through its Board. The only stories that reflect the official policies of the Conservancy are those reporting Board actions, including litigation positions we have taken, comments on proposed regulations, etc.

## ***Our Readers Write***

### **The Hamburg Challenge**

Dear Voice Readers,

Having read so many anti-wind-energy articles in the Voice over the last several years, I challenged wind opponents over half a year ago to present one (1) [**just 1**] example of an area in which the negative impacts (environmental and human) of exploitation of wind energy is greater than exploitation of coal.

I received a response from Peter Shoenfeld telling me -- for the hundredth time -- that coal [currently] covers base-load and wind [currently] can not.

I also received a response, or rather a rant, from which I was unable to decipher perspective or opinion, much less topic. That was it.

From this exercise it would appear that, if the integrity of the greater environment is of importance, wind is a far, far better choice than coal. I do not suggest wind has 0-impact or that all ridges should include wind towers, but there are many that could – and the impacts are far more easily mitigated than impacts from coal. Certainly Coal River Mountain should have wind towers rather than be turned into another plain of West Virginia.

I could understand anti-big-wind folk much more clearly if they were off the coal-fired grid themselves. There have been significant strides in small wind generators – especially vertical axis and certainly more in Europe than the United States. Check it out.

Meanwhile, I'll keep waiting for an example of wind's greater destructive impact – likely endlessly – and will certainly report it when it is brought to light.

Sincerely,

Bob Hamburg

[Bhanaomalous7@gmail.com](mailto:Bhanaomalous7@gmail.com)

## ***Poetry***

### **DEADLY VITTLES**

By Ace Anthony

Alar in the apples  
Gamma rays in bananas  
E-coli in the lettuce  
Hepatitis in green onions  
Salmonella in the salmon  
Mercury in the tuna  
Mad cow in ground beef  
Peanuts in peanut butter  
which most children adore  
but some children abhor!  
Is it any wonder when  
you wander down the  
grocery aisle with  
both hands grasping a  
germ-infected shopping cart  
that you think is there anything  
in here that's safe to eat?

©AceAnthony

### **Another look at Snowshoe**

Dear Editor:

Maybe Dave Cooper needs to take a different look at Snowshoe, West Virginia.

As one of the most economically successful sites by private enterprise in an area that previously did not have any job opportunities, Snowshoe ski resort and how all year resort, is-now a multi-million dollar asset.

As a visitor to this resort, not economically connected at all, Mr. Cooper would probably like to know that Snowshoe was developed by a coal miner (sometime strip miner) named Buford, according to my neighbors and friends in Webster County. Mr. Buford had made millions in coal mining and wanted to give back to the state.

So, he bought over three thousand acres from the owner of a lumber company and decided to build a ski resort. In this wild and wonderful area split only by mountain brooks where the views were spectacular in sight of three major rivers, Mr. Buford made mistakes—using a bulldozer more often than a shovel, but Snowshoe was born.

Economically it failed—at first, but it was not long before people in the United States began to recognize that it was the best ski resort and summer place in the southeast U. S.

Its success was somewhat due to a four or five star restaurant which was located in the Whistlepunk Ski Lodge, which became known as the best eating place in the entire state. Unfortunately, the couple broke up who ran the restaurant, and it went out of business. But, the summer time business took off including the bike trails. For the adventuresome you could go down the mountain road to Silver Creek and up the mountain to Old Spruce (completely gone now) where you could connect to the old Western Maryland Railway to New Spruce. I have followed this trail many times and at New Spruce over the Western Maryland to the highest railroad grade in West Virginia and down to where the railroad crosses US Route 219, where my wife use to pick me up . You can still do it, although the railway is now abandoned, and the going is rough.

Or, you could then and still can do, take the old lumber roads from Old Spruce down the mountain and then across private property to Cass. Yuppie type skill bike rides never interested me, and there is much that they have done in Snowshoe to try and bring in some summer crowds—which does not interest me either. But, Snowshoe is a remarkable achievement, and if Mr. Buford was still alive, he would be proud. This coal miner truly did give back—and the state of West Virginia is the beneficiary.

Sincerely,

Thomas Ward

Baltimore, MD

# ROCKING THE ROARING PLAINS

By Michael Juskelis

09-04 to 06-2010, Roaring Plains Base Camp Backpack and Day Hike: This has been at least my fifth (maybe sixth) time visiting this venue and it never gets old. It was cool and blustery as we began our short hike into our camp. The hiking was pretty effortless. We made two prerequisite vista stops to take in the view of the South Prong Drainage and surrounding plateaus including Dolly Sods.

We reached a surprisingly vacant campsite around 3:00. There was enough flow in the stream to maintain our water supply. Without some much needed rain it might not be there next weekend. We set up camp and then set about doing what ever we wanted to do: power napping, reading, day hiking ... whatever. We ate dinner and built a nice fire but most retired early as the winds drove us into our tents.

The 13.4 mile day hike was as I remembered it except the Hidden Passage and most of the unofficial Canyon Rim Trail has become a hiker super highway. That's not saying that we ran into a lot of other hikers. It's just that the once somewhat obscure trails are now substantially less obscure ... pretty easy to follow actually.

The hike to the Meadows and its wide

open view seemed a bit shorter than before, probably because I no longer have to stop and look at my GPS unit and/or map and compass to get there.

We continued along the old jeep trail and then descended on the gas pipeline to join the Canyon Rim Trail. We stopped at a campsite vista (I have to use this spot at least once,) before proceeding to the still flowing Roaring Run where several folks took the opportunity to collect some cold, sweet mountain water. We took a very long break (as we always do) at the Point before proceeding.

From here you can look up both the Long and Roaring Run Drainages, see Spruce Knob and Chimney Rocks on North Fork Mountain and Seneca Rocks down in the valley just by turning your head. From there we proceeded to hit every vista along the rim, especially the one I call photo op rock, and stopping at Crevice Rock for an extended lunch.

I'm sure everyone enjoyed the long talus slope traverse and descent. After this descent is where I usually adlib my trail finding skills but this time, with a few minor corrections, it was like hiking any other trail.

Once at the junction with the Roaring

Plains Trail we found Bruce Sundquist's hideout. We were greeted by Tom who had stayed in camp while Bruce and the rest of his crew explored the Old Hunter's Blind and other points of interest.

After a break we started down the rocky trail hoping to run into him but after about a half a mile I decided we had had enough rocky trail (and had yet more to hike to get back to camp) so reversed direction and descended down to the Forest road for a leisurely stroll back to the South Prong Trail.

A very steep but thankfully short climb soon found us back at camp. Despite being tired and sore most of us stayed up past our regular time. Perhaps the endorphins had kicked into over drive. Whatever the reason it was nice hanging out by the campfire, reminiscing about previous trips ... classic rock .... trail names.

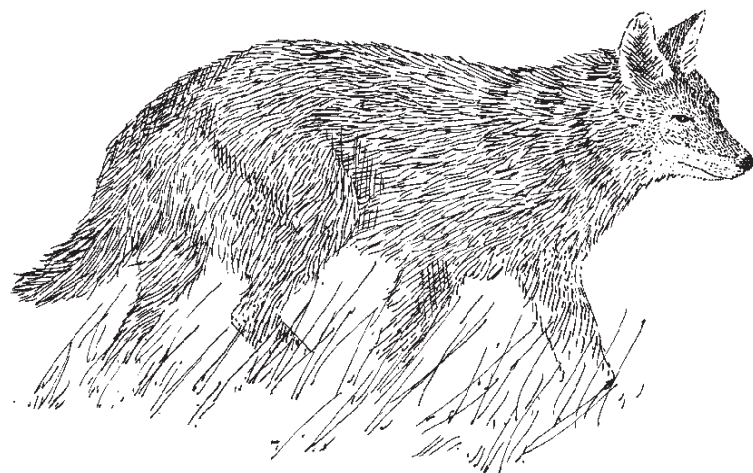
The next morning found us bustling about eager to break camp and find a nice breakfast place in Petersburg before heading home. We did stop at Pancake Rocks but from our vantage point the views seemed to be mostly grown in, but then our stomachs were not much in the mood to linger. We were heading down FR19 by 10:00 and just made it to Family Traditions in time for breakfast!



## BROCHURES

The West Virginia Highlands Conservancy has joined with the Sierra Club, Coal River Mountain Watch, Ohio Valley Environmental Coalition, West Virginia Rivers Coalition, Appalachian Voices, Kentuckians for the Commonwealth, Keeper of the Mountains Foundation and Christians for the Mountains have put together a new brochure entitled **"Mountaintop Removal Destroys Our Homeplace STOP THE DEVASTATION!"** For a copy send a self addressed stamped envelope to Julian Martin, 1525 Hampton Road, Charleston, WV 25314.

Quantities are available for teachers, civic and religious groups and anyone who can distribute them.



# CAR CAMPING AT LAKE SHERWOOD RECREATION AREA

By Michael Juskelis

The late summer weather was wonderful with clear blue azure skies and low humidity. The nighttime temps were just right for sleeping outside. Janet, the dogs and I got to camp around 2:00. After setting up, we took off to find the trailheads for Monday's hike and a much needed gas refill. By the time we returned Ted E. Bear, The Mad Hatter and Hank – "Are You Ready for Some Football?" had arrived and set up their tents. The rest of the evening was as usual: private dinners, some banter around the campfire and then off to bed to listen to the sounds of the crickets, geese and a lone Katydid.

The first hike started at camp. We walked around to the beach bathhouse and



picked up the Lakeside Trail, enjoying an easy 3 mile stroll, mostly through white pine forest, with wonderful views of the lake.

The next two miles were along Meadow Creek, climbing gradually through dense Rhododendron tunnels and crossing the mostly dry stream some eight times before reaching the junction with the Connector Trail. Precious made sure to cool down in the few pools of water we managed to find.

After a brief break we followed this old jeep road as it wound its way, almost

in a corkscrew fashion, to the ridge line of Meadow Creek Mountain. At this point all of the serious elevation gain was behind us. What lay before us now was a wide grassy jeep road that passed through alternating meadows and woods. It seems that the further along we went the fewer and smaller the meadows became.

Occasionally there were partial views of Allegheny Mountain to the east and Middle Mountain to the west. I had hiked the former several years ago and am considering backpacking the latter next year. The hike ended with a rapid descent down another jeep road and through the group camping area to Rt14. From there it was a short road walk back to our campsites.

That night was a repeat of the previous one except some went to bed a bit earlier.

The next day Precious and I led a caravan to Blue Bend Recreation Area where we planted Ted's van for the back end of the shuttle. He and the Mad Hatter jumped into our pickup and we drove around to the South Boundary Trailhead on Big Draft Road. The initial climb was steep and seemed as if it was going to be never ending but ended abruptly with a set of short, steep switchbacks to the top of a ridge.

We descended a bit on an old jeep road before veering off onto a blazed footpath. The trail became quite overgrown with Mountain Laurel and Blue Berry to the point that we all began to do a little head scratching. We backtracked a bit but decided the original path must be correct and pushed through the tangles until we arrived at yet another jeep road.

A check of the map and GPS showed that we were on the correct route. A series of easy walking jeep roads led us to a rapid descent on a narrow side hill trail. All of

our legs, except for Precious', had trouble keeping up with gravity.

Once at the bottom we took a brief break as we waited for that "rubber knees" feeling to subside. The last five miles was a nearly



level and straight walk on old railroad grades passing through Rhodo tunnels, Hemlocks, pines and hardwood forest. Occasionally the Rhodos would open up exposing us to great views of Anthony Creek.

We took a nice lunch at a campsite along a canyon-esque part of the valley. Both the Laurel Creek and Big Draft Crossings were bone dry but one could tell by the steepness of their banks that this is not always the case. In the spring one might need to wade across these. We crossed the creek on a well constructed suspension bridge and soon found ourselves back at Ted's van.

We recovered our pickup and returned to camp for an even more abbreviated version of the preceding two nights, tired from hiking over 24 miles over two days. The next morning found us arising early to break camp and find a nice place for breakfast before heading home. Have you ever been to Granny's House on U.S. 60? We highly recommend it.

