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# *The Highlands Voice*

Since 1967, The Monthly Publication of the West Virginia Highlands Conservancy

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## **Protecting America's Remaining Biodiversity Hotspots**

*How a Coal Company and Regulatory Indifference Jeopardize the Candy Darter*

By Andrew Young

Situated just southeast of Richwood, West Virginia, near Cranberry, the Laurel Creek and South Fork of the Cherry River watersheds harbor outstanding ecological character and tremendous beauty. They also provide some of the best remaining habitat for numerous species of concern, most significantly, the stronghold Upper Gauley metapopulation of the critically endangered candy darter—a beloved native Appalachian fish.

The two watersheds are still remarkably wild and remote, even after 100-plus years of encroaching destructive impacts from the surrounding timber and coal mining industries. These



The Rocky Run Surface Mine operation sits directly adjacent to the Monongahela National Forest and drains into critical habitat for the endangered candy darter. (Photo courtesy the Allegheny-Blue Ridge Alliance Pipeline Airforce)

watersheds are breathtaking—anybody who has fished, kayaked, walked or spent time here will concur.

Amid the climate emergency and accompanying [sixth mass extinction event](#), our time to act is dwindling, and the protection and recovery of these watersheds is more urgent than ever. Put simply, conserving these lands and waters for future generations through preserving the physical characteristics that support this rare biodiversity depends upon responsible and transparent decision-making by regulators, coal and timber operators, and meaningful, informed public involvement.

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# Thoughts From Our President

By Marilyn Shoenfeld

The year is flying by. Leaves are turning and the [Fall Review](#) is only two weeks away. We hope you plan to come, October 13-15 at Canaan Valley Resort. The theme is Water in West Virginia, and it will be a weekend of education, environmental activism and fellowship. On Friday evening there is a meet and greet. Saturday will be a day full of panelists, speakers and outings, concluding with a square dance and live music. Sunday morning brings the annual meeting of the membership, elections and quarterly meeting of the Board of Directors. We hope to see you there.

There has been a personnel change in the Conservancy. We sorrowfully said goodbye to Cory Chase as Program Director. He will be missed. Olivia Miller, our former Communications Director, is now our Program Director. We wish Cory well in his future endeavors and look forward to working with Olivia.

We are pleased to announce that our grant proposal efforts are beginning to bear fruit. We received a

\$4,040 grant from the Appalachian Forest National Heritage Area to create a Highlands Creatures Coloring Book. The coloring book will focus on the unique and diverse native flora and fauna found in the West Virginia highlands and will aim to highlight the interconnectedness of all life found in these special ecosystems.

The Conservancy committees work on various issues, and we partner with and advocate for other organizations to encourage cooperation on environmental issues. One of our biggest concerns is climate change. Perry Bryant, a longtime Conservancy member, has written a document which discusses guidance for two major energy efficiency rebate programs that have emerged from the United States Department of Energy.

These two rebate programs—not tax credits—offer West Virginians a once-in-a-lifetime opportunity to reduce greenhouse gas emissions from their homes or apartments and save on utility bills. Rebates are provided for West Virginians with certain income

levels for things like heat pumps and upgraded electrical wiring. See more on this on page five.

Another group that we work closely with is the Allegheny-Blue Ridge Alliance (ABRA). ABRA's Conservation Hub program promotes responsible resource management by providing access to critical information needed for effective public involvement in environmental review and oversight." They offer an extensive system of Geographic Information Systems (GIS) interactive maps to examine proposed land management projects in context, such as ecological and physiographic properties.

The Conservancy has worked with ABRA to develop a hub site focused on impacts of Off-Road Vehicle usage on public lands. The Conservancy maintains this hub site as new information is obtained and attempts are made by the legislature to open public lands to Off-Road Vehicles.

Another hub site of growing importance focuses on the construction and planning of Corridor H. Maps

can be viewed of both the Parsons to Davis section and the Wardensville to Virginia state line section. Nearly all of the project documents and related comments made by environmental groups, including the Conservancy, can be found on these sites. You can also view areas of special geologic concern, ranges of endangered and threatened species within the project area, construction plans, native trout streams and Tier 3 protected streams and so much more.

Other sites focus on proposed Forest Service projects in the Monongahela National Forest, coal mining in critical candy darter habitat, and stream degradation in the Monongahela National Forest. We are proud to support and partner with ABRA as they expand their conservation hub program. Explore their work at [abralliance.org](http://abralliance.org)

As always, we look to you, our membership, for continued support and participation. Thanks for reading and please email me with questions, concerns or comments at [marilyn.shoenfeld@gmail.com](mailto:marilyn.shoenfeld@gmail.com)

## Protecting America's Remaining Biodiversity Hotspots *continued from page 1*

Unfortunately, instead of tight planning, staunch enforcement, and hawkish oversight by regulatory agencies, one coal company, South Fork Coal Company, owned by [White Forest Resources \(headquartered in Knoxville, Tennessee, through its wholly owned subsidiary Xinergy Corp. and its subsidiaries\)](#) has been strip mining, deep mining, and coal hauling with reckless abandon and disregard in this sensitive ecosystem. While South Fork Coal Company pursues dirty money and contributes immense downstream greenhouse gas emissions from their metallurgical coal (used for the steel-making process, which is between eight to ten percent of global greenhouse gasses emitted), our state and federal agencies have been lax in their oversight and enforcement duties.

This quagmire represents a grand failure of our environmental safeguards, with weak regulators held captive by rogue coal operators. As a result, our waters, rare Appalachian species, and public lands are paying the cost. The time to act is now, or it may be too late for the candy darter. Extinction is forever, but we have the ability and the means to stop it if we can muster the will.

This issue must be framed by two guiding ideals. First, the area at issue is entirely within the proclamation boundary of the Monongahela National Forest. The proclamation boundary for a national forest is the area proclaimed by federal law—here that occurred on April 28, 1920, when President Woodrow Wilson signed the original 1.7 million-acre proclamation boundary es-

tablishing Monongahela National Forest. And second, these watersheds are designated critical habitat for the most important metapopulation of the candy darter. Despite this, the Endangered Species Act requirements under the 2020 Programmatic Biological Opinion are not being complied with at any relevant Surface Mining Control Reclamation Act (SMCRA) permitted facilities.

To the first, although the timber company Weyerhaeuser swooped in to take the land and negotiate its mineral leasing rights to South Fork Coal Company before the Forest Service could, the American People are the rightful owners of these lands and waters. This sacred place is ours, and we want it back.

Were the land at issue to be national forest, as it rightfully should

be, it would be off limits to mining location, and obtaining a mining lease would be burdensome, likely to the point of impossibility. This is because the General Mining Law only applies to "public domain" lands, or lands the federal government has held since they became part of the United States.

Mining claims are not permitted on "acquired lands"—lands that were transferred to private ownership and then reacquired by the United States—although these lands may technically be available for leasing under the Acquired Lands Act of 1947. Virtually all of the Eastern National Forests are acquired lands.

Even if the lands here were to be theoretically open to mine leasing, a federal government agency (the Forest

*continued on next page*

## Protecting America's Remaining Biodiversity Hotspots *continued from page 2*



A small portion of the Blue Knob Surface Mine operation (Photo courtesy the Allegheny-Blue Ridge Alliance Pipeline Airforce)

Service) would be exercising a discretionary action in deciding any lease to coal mining operations. It thus would be subject to rigorous National Environmental Policy Act procedural requirements, substantive formal Section 7 consultation requirements under the Endangered Species Act, and strict requirements under the Clean Water Act.

The product of this “hard look” under the National Environmental Policy Act, as well as the Endangered Species Act BiOp and Incidental Take Statement, and Clean Water Act permits, would be ripe for challenge in federal court if they were inadequate. These permitting hurdles would likely then look similar to those faced by the Mountain Valley Pipeline and Atlantic Coast Pipeline and no doubt result in immense costs for any potential mine operation(s). Furthermore, a mining lease on federal lands would require royalties paid to the United States Treasury and cut further into the operation's profit margin.

Instead, the land is held by Weyerhaeuser and leased to South Fork Coal Company in order to strip mine and clear-cut lands they should not own. Instead of one federal action agency and land manager (the Forest Service) in charge, there is a patchwork of various state and federal agencies, none of whom are in compliance with the Endangered Species Act or other applicable environmental laws. One specific issue the West Virginia Highlands Conservancy has already highlighted in this area is that the Forest Service

has violated the Endangered Species Act and the National Environmental Policy Act by granting South Fork Coal Company a road use permit to cross the Monongahela National Forest from the Rocky Run Surface Mine to the Haul Road #2 without undergoing any National Environmental Policy Act analysis, and without engaging in any Endangered Species Act consultation with the United States Fish and Wildlife Service, both of which are required by law.

Without this Forest Service Road Use Permit, the Rocky Run mine could not get the coal to the processing and loadout plant in Clearco, West Virginia.

The Conservancy is part of a coalition that sent the Forest Service and Fish and Wildlife Service a [notice of intent to sue](#) on these issues, and a complaint is forthcoming. But that pending lawsuit only touches on the National Forest crossing, as the map below shows, and the Endangered Species Act requirements have been disregarded at every facility named on the map below within the Monongahela National Forest Proclamation Boundary.

And to the second issue, the Conservancy is now working with partners to hold the Fish and Wildlife Service and the Office of Surface Mining and Reclamation Enforcement accountable for having systematically violated the Endangered Species Act by failing to oversee and force the West Virginia Department of Environmental Protection's compliance with the 2020 SMCRA Programmatic Biological Opinion (2020 BiOp) requirements that:

**a)** the West Virginia Department of Environmental Protection provide a draft Protection and Enhancement Plan to the Fish and Wildlife Service early in the permitting process for SMCRA facilities with species-specific protective measures to protect the candy darter from jeopardy and adverse modification of critical habitat, and

minimize incidental take during active mining and post mining reclamation;

**b)** that the Fish and Wildlife Service ensure all relevant SMCRA facilities have finalized Protection and Enhancement Plans and the species-specific protective measures are sufficiently protective of the candy darter and its critical habitat; and

**c)** the Office of Surface Mining and Reclamation Enforcement oversees West Virginia's implementation of SMCRA and enforces the requirements of the statute when the State has failed to do so, including the requirement that SMCRA facilities that drain to candy darter habitat have adequate Protection and Enhancement Plans in place.

South Fork Coal Company has a track record of rampant non-compliance with the water protection requirements of SMCRA and the Clean Water Act across all of its permitted facilities in the South Fork Cherry River and Laurel Creek watersheds.

Most recently, South Fork Coal Company was issued a Notice of Viola-

Protection, OSMRE, and the Fish and Wildlife Service to fashion and effectively implement appropriate protective measures.

At this time, however, 30 months after the issuance of the 2020 BiOp, the West Virginia Department of Environmental Protection has taken no action to initiate the process of developing Protection and Enhancement Plans for the candy darter and its designated critical habitat for any SMCRA permitted operation affecting the species in either of these two watersheds.

This is both surprising and unacceptable because South Fork Coal Company is the only coal company operating in candy darter critical habitat. Yet, none of the company's relevant SMCRA-permitted facilities have Protection and Enhancement Plans in place for this species, a 2020 BiOp non-compliance rate of 100%.

Stay tuned for part two in this series for a more in-depth discussion of the Endangered Species Act, particularly as related to coal mining activities



Map courtesy of the Allegheny-Blue Ridge Alliance Conservation Hub: showing Mon NF in dark green shading, Mon NF Proclamation Boundary in tan, Candy Darter Designated Critical Habitat in lime green, CWA 303(d) listed impaired streams in red

tion for spreading raw coal, a toxic pollutant, across the surface of Haul Road #2 that drains to candy darter critical habitat (see map above).

The manifest harm that the candy darter has suffered due to coal industry pollution underscores the need for the mine operator, the West Virginia Department of Environmental

in designated candy darter critical habitat, and the systematic violations by South Fork Coal Company and regulatory agencies in these two watersheds. For more information, please visit the Allegheny-Blue Ridge Alliance Conservation Hub website [“Coal Operations and Candy Darter Habitat.”](#)

## Get Excited! It's Almost Time for the Fall Review

The West Virginia Highlands Conservancy's Fall Review is Oct. 13-15 at Canaan Valley Resort State Park. Come meet new and old friends and learn about water issues in West Virginia. Interesting and fun stuff GUARANTEED.

To view the full schedule, see page 9. To RSVP, visit <https://bit.ly/FallReview2023>

## The Highlands Voice: It's Not Just for Reading Any More

The Highlands Voice is the main way that the West Virginia Highlands Conservancy communicates with its members. But we would like to communicate with more than our members. We have a valuable perspective and information; we would like to communicate with everybody. We still offer electronic delivery. If you would prefer to receive it electronically instead of the paper copy please contact Crys Bauer at membership@wvhighlands.org. With electronic delivery, you will receive a link to a pdf of the Voice several days before the paper copy would have arrived.

No matter how you receive it, please pass it along. If electronically, share the link. If paper, hand it off to a friend, leave it around the house, leave it around the workplace. It's not just for reading. It's for reading and passing along.

## BUMPER STICKERS

To get free I ♥ Mountains bumper sticker(s), send a SASE to P.O. Box 306, Charleston, WV, 25321. Slip a dollar donation (or more) in with the SASE and get two 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.)



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Please email any poems, letters, commentaries, etc. to the Voice editor at comms@wvhighlands.org or by real, honest to goodness, mentioned in the United States Constitution mail to WV Highlands Conservancy, PO Box 306, Charleston, WV 25321.

# Opportunities of a Lifetime: Energy Efficiency in West Virginia under the Inflation Reduction Act

By Perry Bryant



The Inflation Reduction Act established two energy efficiency rebate programs to transform households' energy usage: the Electrification and Appliance Rebate program (referred to as the Electrification program) and the Home Efficiency Rebate program (the Efficiency program). Unlike tax credits, rebates don't require consumers to pay up front for home efficiency measures and then get reimbursed when they file a tax return. Rebates are provided at the point of sale, offering consumers immediate savings.

In July 2023, the United States Department of Energy released requirements for these two programs and instructions for how states can apply for these funds. This is a summary of the Department of Energy requirements.

## The Electrification Program:

This program provides rebates of up to \$14,000 to low-income homeowners and some owners of multifamily buildings. These rebates include:

- **Heating and Cooling Pump:** \$8,000
- **Electrical Service Box:** \$4,000
- **Electric Wiring:** \$2,500
- **Insulation, Air Sealing, and Ventilation:** \$1,600
- **Heat Pump Water Heater:** \$1,750
- **Electric Stove or Heat Pump Clothes Dryer:** \$840

Low-income is defined as households earning less than 80% of the Housing and Urban Development's Area Median Income. Using West Virginia as the area, that would include individuals earning less than \$40,000 a year and families of four earning less than \$57,150 a year.

Note that it is unclear if the area in Area Median Income refers to counties or the entire state. HUD provides data on both. If counties are determined to be the area in Area Median Income, then these numbers will

change.

Moderate-income households qualify for half of the rebate amounts listed in the chart above (e.g., a \$4,000 rebate for a heating and cooling heat pump). Moderate income is defined as households who earn between 80% and 150% of the Area Median Income. For an individual in West Virginia that's someone who earns between \$40,000 and \$75,000; and for a family of four that includes households who earn between \$57,150 and \$107,100 a year. Households with incomes above 150% of Area Median Income do not qualify for any rebates under the Electrification program. These are 2023 numbers for Area Median Income and will be adjusted by HUD in spring 2024.

Owners of multifamily buildings qualify for the rebates listed in the chart above if at least 50% of the residents in the building are low-income, earning less than 80% of the Area Median Income. If at least 50% of the residents qualify as moderate income, then the building owner can receive 50% of the rebates listed in the chart above.

To qualify for rebates, the measures listed in the chart above can only be part of a new construction; or to replace a non-electric appliance, (e.g., switching from a gas furnace to a heating and cooling heat pump); or for the first-time purchase of a heating and cooling heat pump. Upgrading an existing heating and cooling heat pump for a more efficient one does not qualify for a rebate.

This is a lot of numbers. But the bottom line is that there are significant rebates for home electrical improvements for a lot of West Virginians.

**Efficiency Program:** Unlike the Electrification program, the efficiency program does not have a list of rebates for specific home improvements. Rather a home energy audit is conducted and a contractor either models what energy savings are projected to be achieved with the installation of selected energy efficient mea-

asures (adding insulation, for example); or the contractor can measure the impact on energy consumption that the installed energy efficiency measures have over time. The state's Office of Energy decides whether to approve one or both of these approaches (modeling or measuring).

Under either approach the more energy savings, the greater the rebate. For example, under the modeling approach, if the selected energy efficiency measures are projected to reduce a low-income household's energy usage by more than 35%, the homeowner receives a rebate of \$8,000 or 80% of the project cost, whichever is less. If the projected energy savings are only 20% to 34%, then the low-income homeowner receives a rebate of \$4,000 or 80% of the project cost, whichever is less.

Households with incomes above the low-income threshold qualify for reduced benefits. There are no upper income limits to qualify for rebates under the Efficiency program. Millionaires could qualify for a rebate. If, for example, a homeowner with income at say 200% of the Area Median Income installs energy efficiency measures under the Efficiency program and the projected energy savings are 35% or more, the rebate is \$4,000 or 50% of the project cost whichever is less.

Owners of multifamily buildings where 50% of the renters qualify as low income, and where the energy savings are projected to be more than 35%, will receive a rebate of \$8,000 per dwelling or 80% of the projected cost whichever is less. Where a majority of renters have incomes above the low-income threshold, and energy consumption is projected to be greater than 35%, the rebate is \$4,000 per dwelling capped at \$400,000 per building.

**Total Funding with Specific Funding for Low-Income Households:** if the Department of Energy approves West Virginia's application, the State will receive \$44 million for each of

these programs with a requirement that a portion must be spent on low-income households. Of the \$44 million in the Electrification program, \$10.4 million must be spent on low-income homes and an additional \$2.6 million must be spent on low-income multifamily buildings. Similarly, of the \$44.3 million in the Efficiency program funding, \$10.5 million must be spent on low-income homes and an additional \$2.7 million must be spent on low-income multifamily buildings.

**When Will These Rebates Be Available?** Good question. The West Virginia Office of Energy will need to submit an application to the United States Department of Energy. In seeking federal approval, the State must develop a Community Benefit plan that has strong consumer and labor protections. The Department of Energy will need to approve this application before rebates can be made. January 1, 2024, is probably a reasonable target.

**Conclusion:** West Virginians have a once-in-a-life time opportunity to decrease greenhouse gas emissions from their homes and apartments as well as save money on skyrocketing utility bills. The state has some of the highest home ownership percentages in the country. Yet our housing stock is some of the least energy efficient in the country. Perhaps no state in the country can benefit more from these two energy efficiency rebate programs than West Virginia.

Unfortunately, the parameters of these two energy efficiency rebate programs are complex and confusing. Making the benefits clear to the thousands of West Virginians whose homes can be improved through these two programs will be a daunting task. We should all do what we can to educate our friends and neighbors on how they can take advantage of these two programs. An opportunity like this is unlikely to occur again any time soon.

The full DOE guidance can be found at <https://bit.ly/3PZK94I>

# Banning Lead Shot, Protecting Wildlife: Is There Hope on the Horizon?

By John McFerrin

We have known for decades, if not centuries, that lead is toxic. Over the past 50 years, we have gone to great lengths to eliminate lead exposure, banning leaded gasoline and lead paint. Most of the lead that is disposed of, whether it be leaded batteries or lead pipes, is regulated. Even the control and disposal of spent ammunition at shooting ranges is regulated. There is only one major source of lead that enters our environment unregulated: lead ammunition.

Much of the lead ammunition that enters our environment is ingested by wildlife. Lead ammunition can break into small fragments that are easily picked up by scavenging and foraging wildlife. Imagine a Mourning Dove or other ground-foraging bird, pecking around for seeds or small gravel to aid in digestion. In the course of this, it can consume lead. Predators who eat doves or anything else that consumes lead fragments are exposed. The threat extends to humans who eat animals who have been killed with lead ammuni-

tion.

The use of lead tackle threatens birds. Lead, which is discarded or otherwise enters a lake, is picked up by diving birds along with the small gravels that they use to grind food in their digestive system. As it is ground in the digestive system, it is ingested by the birds.

Hunters of game such as deer often field dress the deer they kill. Gut piles are left behind, piles which scavengers such as eagles eat. If the hunters use lead ammunition these birds ingest lead.

[The story by Cindy Ellis](#) in the September 2023 issue of The Highlands Voice provided many examples of the results of ingesting lead. It is not an abstract problem, existing only in the minds of researchers. As the story shows, there are real birds being killed right here in West Virginia.

The problem is widely acknowledged; in its discussion of why it was proposing a ban on lead ammunition at several Wildlife Refuges, the

Fish and Wildlife Service referred to multiple studies, all saying that lead ammunition and lead tackle are harmful to wildlife. There are no studies to the contrary.

Those who wish to continue hunting with lead ammunition point to the additional cost of non-lead ammunition. Some even worry that the additional cost will make hunting inaccessible to some people.

While it is true that non-lead ammunition can be more expensive than some types of lead ammunition, the cost is minor. There are many costs involved in hunting, from the cost of gear, transportation, licensing, etc. As a fraction of the total cost of a hunting trip, the increased cost of making that trip lead-free is minor.

What available data there is does not support the idea that an increased cost of ammunition would drive people away from hunting. The Fish and Wildlife Service manages lots of land; some of it allows lead ammunition. From its data, the Service reports

no decrease in hunting where lead ammunition has been banned.

For multiple reasons, banning of lead ammunition and fishing tackle in all locations would be a worthwhile step forward. California, for example, has already taken that step, banning lead ammunition in 2019.

Even if there is no currently pending proposal to ban lead ammunition in all of West Virginia, West Virginia and the United States Fish and Wildlife Service do have the opportunity to take that first step by banning lead ammunition and tackle in the Canaan Valley National Wildlife Refuge. Even if competing interests might be balanced differently on the vast majority of West Virginia land, in a Wildlife Refuge the interests of wildlife come first. Banning lead there would be a first step. The Fish and Wildlife Service had taken that first step before the West Virginia Department of National Resources interfered.

**What is a wildlife refuge?**

*continued on next page*

## An Update from the West Virginia Environmental Council

By Lucia Valentine



The West Virginia Environmental Council has been working hard year-round to advance multiple campaigns in preparation for the 2024 legislative session. Whether you have experience or are new to advocacy, we welcome your involvement by filling out our volunteer survey at [wvecouncil.org/volunteer](http://wvecouncil.org/volunteer)

The West Virginia Environ-

mental Council will host their annual meeting November 3-5 at picturesque Tygart Lake State Park in Grafton, West Virginia. We will set our legislative priorities for 2024, talk about strategies and have some fun outdoors. Take advantage of this opportunity to connect with fellow environmental enthusiasts and contribute to the future of West Virginia! Learn more and register at [wvecouncil.org/annual-meeting](http://wvecouncil.org/annual-meeting)

Additionally, West Virginia Environmental Council is hiring lobby team members to perform in-person legislative lobbying during the 2024 legislative session, which runs from January 10, 2024, through March 9, 2024 — Interested in applying? Visit us at [wvecouncil.org/2024-lobby-team-job-opening](http://wvecouncil.org/2024-lobby-team-job-opening)

## A New Project: Highlands Creatures Coloring Book!

By Olivia Miller

The West Virginia Highlands Conservancy has recently been awarded a \$4,050 grant from the [Appalachian Forest National Heritage Area](#) to create an informative 20-page coloring book highlighting the native flora and fauna of the West Virginia highlands.

The highlands of West Virginia encapsulate a unique and diverse range of native flora and fauna that we are interdependent on.

Beavers help create wetland habitats; elderberries and ramps provide food; trees provide shelter for animals and heat raw materials for humans; turkey tail mushrooms break down organic matter and make medicine in the process; bees and butterflies pollinate plants. The list goes on! We aim to encapsulate this circle of life with this project.

We will work with Appalachian cartoonist and illustrator Natalie Kovacs—known as Shapelessflame—to bring the Highlands Creatures Coloring book to life. Kovacs specializes in drawing critters of all kinds, and her illustrations and cartoons are created both traditionally and digitally.

We hope this coloring book will be a launchpad for children (and adults) to explore the highlands of West Virginia, as well as address the collective human impacts on the natural environment and learn ways to lessen these impacts.

The coloring book will be completed later in 2024 and will be available on the Conservancy's online store. Stay tuned for updates in The Highlands Voice and on our social media networks.

## Banning Lead Shot *continued from page 6*

By John McFerrin

To understand the current controversy about the use of lead shot, it is important to understand the purpose of a federally protected and designated Wildlife Refuge, like the one at Canaan Valley. Its purpose is in its name: it is a refuge for wildlife. In the words of the National Wildlife Improvement Act of 1997, the mission of the Wildlife Refuge system “is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans.”

A Wildlife Refuge is not a park, serving the needs of people as well as birds, bees, trees, etc. It is not a National Forest, managed by the National Forest Service for “multiple uses” such as recreation, timber, minerals, watershed, wildlife and fish, and natural scenic, scientific and historical values.

In a Wildlife Refuge, protecting the wildlife is all that matters. If protecting wildlife required that people be entirely excluded, the U.S. Fish and Wildlife Service would be entirely justified in excluding all people. If pro-

tecting wildlife required prohibiting all hunting, then the Fish and Wildlife Service would be entirely justified in prohibiting all hunting. It is the wildlife that matter; if other uses of the land can be squeezed in without impairing wildlife, they could be allowed. But the purpose of a Wildlife Refuge is to provide a refuge for wildlife.

While the core purpose of a Wildlife Refuge is protecting wildlife, there are some uses that have been recognized as “wildlife-dependent recreation.” These are things such as hunting, fishing, wildlife observation, and photography, or environmental education and interpretation.

### The present controversy

The purpose of a Wildlife Refuge is to protect wildlife. Starting with that purpose in mind, the Fish and Wildlife Service has the authority to crack open the door a bit to allow in other uses, including hunting.

At Canaan Valley National Wildlife Refuge, the Fish and Wildlife Service long ago cracked open the door and admitted hunting as an acceptable activity on the Refuge. In order to do this, it had to make a determination that hunting would be compatible with

its primary mission of protecting wildlife.

In 2022, the Fish and Wildlife Service continued the process of managing to protect wildlife while allowing regulated hunting. It proposed a bunch of changes to how hunting is done at several Wildlife Refuges across the country. Most of these were uncontroversial.

The Fish and Wildlife Service did kick the hornets’ nest in one area: it proposed phasing out lead ammunition and tackle at ten Wildlife Refuges, including the Canaan Valley National Wildlife Refuge. This generated thousands of public comments.

For West Virginia, the most significant comments came from the West Virginia Department of Natural Resources. It opposed all changes as they applied to Canaan Valley National Wildlife Refuge, including the phasing out of lead ammunition and tackle.

In response to the comments, the Fish and Wildlife Service justified the phasing out of lead ammunition and tackle with arguments, references to scientific literature, etc. It considered the comments that opposed the phasing out of lead, and, in nine of the

ten Wildlife Refuges, it went ahead with its plan to phase out lead.

The exception was the Canaan Valley National Wildlife Refuge. Unlike on other Refuges, the Fish and Wildlife Service didn’t argue back. It just capitulated to the comments of the West Virginia Department of Natural Resources and abandoned its proposal to phase out lead ammunition and tackle at Canaan Valley National Wildlife Refuge.

### Law to the rescue?

In response to the Fish and Wildlife Service’s capitulation, the Friends of Blackwater, the National Wildlife Refuge Association, and the Sierra Club filed suit in the U.S. District Court for the District of Columbia. They contend that the National Wildlife Improvement Act, which says how Wildlife Refuges are to be managed, would not allow the Fish and Wildlife Service to ignore the extensive evidence that lead is harmful to wildlife.

This is particularly true when one considers that the primary—and only—purpose of a Wildlife Refuge is the protection of wildlife. Hunting may exist on a Refuge, but only if it does not interfere with the protection of wildlife. The case is still pending.

## Spotted Lanternfly on the Move in West Virginia

In mid-September, the West Virginia Department of Agriculture reported that the invasive spotted lanternfly has been found in two additional West Virginia counties: Grant and Hardy. Grant and Hardy mark the ninth and tenth counties in West Virginia where spotted lanternfly have been detected. The other counties include Hancock, Brooke, Mineral, Hampshire, Morgan, Berkeley, Jefferson and Taylor.

As reported in the [July 2023 issue of The Highlands Voice](#) by Patricia Gundrum, the spotted lanternfly is native to China and other regions of Asia. First detected in Berks County, Pennsylvania, in 2014, they have managed to spread to most counties in Pennsylvania and Maryland in a decade.

The spotted lanternfly can only travel short distances but have been successful in their rapid dispersal by hitchhiking on vehicles, trailers, boats and ATVs. It is recommended to squash or stomp on spotted lanternflies at all of their life stages, and to check your vehicles for any freeloaders.

## Congress Tries to Get into the Act

Congress has made what is so far a feeble attempt to weigh in on the issue of lead shot ammunition. In 2022 the United States Senate had before it the Protecting Access for Hunters and Anglers Act of 2022. It was assigned to a committee but there was no further action.

In 2023 Congress has before it the Protecting Access for Hunters and Anglers Act of 2023, co-sponsored by both Senator Capito (R-WV) and Senator Manchin (D-WV). So far there has been no action. Depending upon what other priorities Congress has, who owes who what favor, the phase of the moon, etc. it may die a quiet death, suddenly spring to life, or do something else.

This is the summary of the bill, prepared by Congressional Research Service: This bill bars the Department of the Interior and the Department of Agriculture from prohibiting or regulating the use of lead ammunition or tackle on federal land or water that is under the jurisdiction of such departments and made available for hunting or fishing. The bill makes exceptions for specified existing regulations and where the applicable department determines that a decline in wildlife population at the specific unit of federal land or water is primarily caused by the use of lead in ammunition or tackle, based on the field data from such unit, and the state approves the regulations.

Given everything else that is going on in Congress right now this proposal may never have any impact on anything. At the same time, it is pending and may intrude into this controversy.

# Wilderness Trails (Part Two of Part Two)

By Dave Johnston

In the first part of this series, we looked at how trails—unquestionably a human structure—can be justified, and even encouraged, in Wilderness areas, which by definition are supposed to be free of human manipulation and evidence of their presence. In the second part we examined how trails can be planned to compatibly fit into the primitive character of Wilderness, or how we have to make the best of existing, less than ideal routes. In this final installment we'll take a look at how carefully calibrated human intervention can be used to keep trails primitive and natural, with minimal impact of the Wilderness and human safety.

Whatever their type or origin, trails need to be maintained. Plants will grow around, over and through the trail, and trees will fall across it. Water will take advantage of downhill slopes to create channels and eventually erode the trail. Or water may take advantage of poor drainage and the deepening trough of the trail tread to just stand there and create a mudhole. Hikers will try to avoid obstacles or mud and bypass the trail, impacting the environment to the side and creating an ever-widening scar in place of an unobtrusive wilderness path.

The fundamental goals of trail design and maintenance are to keep water off the trail and keep people on the trail. That means that the flow of water should be visualized and controlled so that water will not stand on the trail or flow quickly or in large volume across or along it. Importantly, “hiker psychology” should be anticipated, and an attractive means of passage be provided that encourages hikers to stay on the center of the trail tread and not be tempted to skirt the edge or entirely bypass the trail.

Ideally, trails will be sloped to

the downhill side so that any water that arrives on the trail can drain uniformly off without forming channels. In practice the up and down contours of trails need to be used to create periodic drains that channel water off the trail, and the tread hardened or placed with rocks to provide a surface that is both durable and attractive to hikers. On flat contours or wetland crossings drainage may not be possible, so rock stepping stones, a boardwalk or raised causeway may be provided.

Clearly, trees or limbs that have fallen across the trail, which could represent a safety issue for hikers or force them off the trail, need to be removed. Similarly, overgrown vegetation that makes the trail hard to follow, unsafe, or excessively unpleasant should be trimmed away.

However, all of this “engineering” may not be compatible with the idea of inherently primitive trails in designated Wilderness. Wilderness trails need to provide for the safety of users and protection of the resource while still retaining a primitive feel and avoiding evidence of human intervention or manipulation. Applying these principles to Wilderness requires special considerations and application of a “light touch” wherever possible, following the dictum of “minimum requirements.”

The best approach is to design and place trails in the first place so that they can still be primitive, with the characteristics of Class 1 or 2 types, without obvious structures or manipulation of the landscape to allow for drainage and user fidelity to the tread. Such “hidden engineering” is entirely compatible with Wilderness.

Where existing trails must be maintained (and can't be rerouted) unobtrusive drainage measures can still

be used and may be better for the environment than doing nothing. However, their goal may not be to provide a nice, dry footpath, but rather one that offers the hiker a more attractive option among other less than perfect ones. The trail may still be wet or muddy, but natural materials such as steppingstones, logs, or selective fill used to create the “best” route through the area. For wetland crossings, a boardwalk or puncheon system, which allow for continuous sheet flow of water, may be preferable to an elaborate causeway or turnpike, which are more intrusive structures, interfere with natural wetland flow, and usually require “borrowing” materials from somewhere else in the landscape.

A similar light hand can be applied to clearing vegetation. Fallen trees must be cleared to provide for safety and keep hikers on the trail. But logs that can easily be stepped over need not be removed, and not every leaner needs to be eliminated. While more developed trails may have bushes cut away several feet beside the trail, such a “parkway” look can be an obvious sign of human manipulation. A better approach is to thin branches that impinge on the trail at their base, leaving shorter branches to maintain the natural corridor.

So to sum up: though they may be simple footpaths, there is a lot more “under the surface” of trails than you might expect. The type of trail and the manner in which it is created and maintained needs to be consistent with not only its environment, but also the type and expectations of users and the requirements of the natural area they traverse. This is particularly challenging for Wilderness trails, which must provide the access for people envisioned by the Wilderness Act while still

providing a primitive experience and minimizing signs of human manipulation.

The trails of Dolly Sods are notoriously primitive and challenging. This is partly due to their origin as railroad grades and the long-term effects of logging and fires, but it is also in keeping with the intended character of wilderness trails. Some of them could stand to be relocated (and that may happen in the future), and many areas could benefit from better water management and drainage, or from setting up a more attractive way to get through long mud holes. The Dolly Sods Wilderness Stewards Trail Maintenance team expects to be working with the Monongahela National Forest to take on some of the worst areas over the coming years.

But it is also true that Dolly Sod trails will always be rocky, uneven, unblazed and unrefined, with natural obstacles and the need for mindful navigation. Dolly Sods trails will always traverse wetlands and poorly drained slopes, and there will always be a need to contend with mud, and to exercise care to stay safe and to minimize further impact on the resource. But this opportunity for access to a primitive, challenging, even humbling experience is precisely what the framers of the Wilderness Act had in mind!

**JOIN US:** You can join the Wilderness Stewards and be part of our Trail Maintenance team. Just go to the Conservancy website ([wvhighlands.org](http://wvhighlands.org)) and follow the links for Dolly Sods Wilderness Stewards to read more about what we do and access the online signup form. Once you sign up you will receive more information about upcoming training and work project opportunities.

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*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.*





**WEST VIRGINIA HIGHLANDS CONSERVANCY**

Annual Fall Review Schedule of Events | Oct. 13 - 15 | Canaan Valley Resort State Park

**FRIDAY, OCT. 13**

**6-9 p.m.** Networking and Hors D'oeuvres at Main Lodge

**SATURDAY, OCT. 14**

**7:15 a.m.** Bird Walk (carpool from main entrance)

**8:30-9:20 a.m.** Breakfast

**9:20 a.m.** Welcome

**9:30 a.m.** Panel: Sedimentation and Candy Darter

**10-11:15 a.m.** Break

**11:15 a.m.** Presentation: Acid Mine Drainage

**12-1 p.m.** Lunch Buffet

**1-2 p.m.** Outing: CVSP Water Treatment Plant (carpool from main entrance)

**2 p.m.** Panel: Small Town Water/PFAS

**SATURDAY, OCT. 14**

**3:30-4 p.m.** Water Warrior Ceremony + Break/Networking Time

**4 p.m.** Presentation: Water Legislation Updates

**5-6 p.m.** Dinner

**6 p.m.** Keynote Address: Water Justice by Nicolas Zégre, Associate Professor of Forest Hydrology at WVU

**7:30 p.m.** Square Dance and Live Music

**SUNDAY, OCT. 15**

**8:30 a.m.** Mindfulness Walk

**10 a.m.** Annual Membership Meeting (Election of Officers and Directors)

**10:15 a.m.** Quarterly Board of Directors Meeting

RSVP at [bit.ly/FallReview2023](https://bit.ly/FallReview2023)

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Working to keep West Virginia Wild and Wonderful since 1967.

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Sustaining	\$100	\$150	\$200
Patron	\$250	\$500	\$500
Mountaineer	\$500	\$750	\$1000

# Become a Dolly Sods Wilderness Steward!



Sign up today at [bit.ly/DollySodsWildernessStewards](https://bit.ly/DollySodsWildernessStewards)

# 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.

# Book Review: Smokescreen, Debunking Wildfire Myths to Save Our Forests and Our Climate by Chad Hanson

Review by John McFerrin



This is a book about forest fires—how we talk about them, how we think about them, and, most importantly, public policy toward fire control and suppression. Any discussion about fire inevitably leads to a discussion of logging, including how we manage logging on public lands.

The bedrock of the argument is its attitude toward wildfires. As a society, we think of fire as devastating, something to be avoided. We learned at our mother's (or, more precisely, Smoky the Bear's) knee that fire is something to be prevented. News reports of wildfires routinely describe the landscape as "devastated."

From the perspective of a forest ecologist, such as the author, a wildfire is not a disaster. A post-fire landscape is not devastated, just different. Wildfires have been a feature of forests for millions of years. In that time the entire ecosystem has adapted. An intense fire leaves behind a landscape of standing dead trees. It also leaves behind nutrients that have been released from trees or underbrush that burned as well as a landscape that is inviting to the plants and animals that have adapted to that

kind of landscape.

The book is full of examples. There are wildflowers that colonize burned areas. The wildflowers attract flying insects which, in turn, attract birds who make their living plucking insects out of the air. The standing snags attract woodpeckers, including one whose black coloring makes it nearly invisible against a charred tree trunk. They come for the grubs; they stay and create tree cavities that many birds and animals depend upon. Many of the creatures that live in the cavities attract the attention of owls, including species that live in adjacent areas where the trees are still green but hunt in the burned over areas.

The villains of the book are logging companies who, in the author's view, propagate misconceptions about forest ecology and the role of fire in it. Their interests lie in converting trees into marketable timber. To advance these interests, they promote ideas that are contrary to the health of forests. The co-stars in the villain role are land managers (including the United States Forest Service) that acquiesce in these misconceptions or help propagate them.

There are two practice which draw his ire: salvage logging and "thinning."

A wildfire often leaves behind a forest of standing snags. In salvage logging, logging companies come and clear cut the snags. The justification is that the area has been "devastated" by fire. We should make the best of a bad situation and take what little bit still has value.

The author would disagree. Standing dead trees are still sequestering carbon, as are downed logs. They are providing the benefits to the plants and animals who have adapted to living in burned over areas. Cutting the snags (particularly if their destination is to be burned to produce electricity; the euphemism for this is "biofuels") results in the immediate release of that car-

bon. Salvage logging has the incidental effect of interfering with the transition of the burned area back into a conventional, living forest. Loggers and their equipment compact soil, tromp on new vegetation, and generally delay the natural processes that would occur were there no salvage logging.

The second practice is "thinning." This is promoted as a fire prevention tool. The argument is that removing some of the brush and trees will deprive fires of "fuel", making them less intense.

The author would say that thinning is a scam (my word, not his) used to justify more logging. While the term "thinning" might conjure up images of a homeowner with loppers, snipping off branches there and there, many "thinning" operations take out valuable timber.

The book also challenges the idea that thinning makes a contribution to forest health and makes wildfires less intense. The idea is that taking out smaller trees deprives a fire of the fuel it needs to become intense. Not so, says the author. The drivers of wildfire are wind and weather. A forest that has been thinned provides less of a windbreak than one that has not. It also allows more sunlight to penetrate, making conditions dryer. The author cites research showing that fires in forests that have been "thinned" are no less intense than those in unthinned forests.

This anti-logging argument eventually comes around to climate change. The author notes that if we are going to avoid the worst effects of climate change, it will not be sufficient to stop putting carbon dioxide into the atmosphere. We will have to remove some of the carbon that is already in the air. A major way of doing that is trees. There may be theoretical ways of mechanically capturing carbon from the air and sequestering it. Trees are not theoretical; they are out there doing it. To deal with climate change, we

need to let them continue doing it, not cut them down.

The book does not ignore the needs of people whose homes are endangered by wildfire. They cannot fly away and come back later, making their living pecking for grubs in what used to be their home. They need protection.

The first step in effective protection comes in how one sees the problem. If the true drivers of wildfire are wind and weather, fighting a fire will usually be a losing proposition. Firefighters can make a valiant effort but if wind and weather are against them, the fire wins. The book suggests it is no more effective than "fighting" a hurricane.

The effective protection comes from controlling what we can control by making homes fireproof. Many house fires are started by embers, flying well ahead of the fire itself and igniting homes. The defense against this is such things as fireproof roofs and screens to keep embers from entering attics. In places where wildfires have been least destructive of homes, there are requirements that homeowners maintain a distance between their homes and the forest.

A note about the author, the research, and the writing. The ideas in the book are contrary to conventional wisdom. Those who think the conventional wisdom is sound take exception to this work, some of which is expressed on the internet. There is nothing so intense as talking trash about Taylor Swift or Beyoncé would produce but it is there. At the same time, he is a trained ecologist. Smokescreen is extensively documented. The studies upon which he relies are noted in the book. He often relies upon his own fieldwork.

For the most part, the book is readable. There are occasional lapses when he lets his inner tree nerd emerge, but these are short, usually just a couple of paragraphs. For the most part it is both readable and useful in thinking about forest policy.

# Mushroom Meander 2023: Another Successful Outing

By Larry Thomas



Mushrooms are among the most mysterious life forms, and here in West Virginia, mushrooms are thriving. According to the West Virginia Division of Natural Resources, nearly 1,700 species of mushrooms and other types of large fungi have been found in our Mountain State.

Due to last year's popularity, the West Virginia Highlands Conservancy scheduled another Mushroom Meander on September 10, and over 25 individuals attended. The weather forecast caused several individuals to cancel, providing me an opportunity to snag a spot to attend. Mother Nature was kind and provided beautiful weather during the entire event.

Once again, the trip leader was Dr. Kristen "Kay" Wickert. See her popular Instagram account ([@kaydubsthehikingscientist](https://www.instagram.com/kaydubsthehikingscientist)) with over 32,000 fans that is chocked full of interesting woodland flora and fauna. Kristen is a professional naturalist, botanist, forest entomologist, and plant pathologist and describes herself as a "Nature Nerd in Appalachia" on the site. She holds a bachelor's in forest biology from Penn State and a master's and PhD in plant pathology from West Virginia University. She studies the interrelation and interdependence between fungi, arthropods, and plants.

Kristen is also the president of

the [West Virginia Mushroom Club](https://www.wvmushroomclub.net), a non-profit organization founded to promote fellowship, communication and education for anyone interested in fungi. It is an amateur club, and although members' skills range from beginners to world-renowned experts, most are beginners.

We again met at the main lodge at Canaan Valley Resort State Park and decided to hike down the hill behind the lodge to a patch of woods filled with various and sundry fungi. Meandering through the woods, finding more and more species every step of the way.

Kristen kept us moving, stopping occasionally and telling us to "think like a mushroom." That was the clue for everyone to spread out and search for mushrooms, bringing them back to a central spot where Kristen would identify each find by name and provide a great description of the caps, gills, stalks, and classifications plus the wide range of flavors, smells and consistencies. Some of these mushrooms are food and/or medicine, and she discussed edible vs. nonedible for those of us amateurs, as there are so many poisonous mushrooms that look like edible mushrooms.

Because we were blessed with rain for several days before the event, there was plenty of moisture which spawned plenty of mushrooms. We

found puffballs, waxy caps, cordyceps, a death angel, turkey tails, and the coveted chaga. Two that I found very interesting were the death angel and chaga. [The death angel](#) is very poisonous and can cause serious illness or death if ingested, while chaga mushrooms are good for boosting your immune system, fighting cancer, and lowering your cholesterol. You can consume this antioxidant-loaded fungus as a tea or supplement.

There were many more species. We found so many types of mushrooms right down the hill from the main lodge, proving that we don't have to look far to find the plethora of fungi interacting with plants, insects and trees.

For mushroom guides, Kristen recommended [Mushrooms of the Northeastern United States and Eastern Canada](#) by Tim Baroni; other Highlands-centric guides include [Appalachian Mushrooms](#) by Walt Sturgeon and [Mushrooms of West Virginia and the Central Appalachians](#) by William C. Roody. [Mushroomexpert.com](https://www.mushroomexpert.com) is also a good resource.

Participants certainly learned a lot about mushroom identity and characteristics on this great meander through the woods. For me, I want to learn even more.

The Conservancy wants to thank Canaan Valley Resort State Park for again hosting our outing. A very special thanks to Dr. Wickert, of the West Virginia Mushroom Club for again leading the meander. You can become a member of the West Virginia Mushroom Club on their website [wvmushroomclub.net/join-us](https://www.wvmushroomclub.net/join-us)

We plan to continue mushroom and other outings next year and into the future. Keep an eye on us at [wvhighlands.org](https://www.wvhighlands.org) as well as on our social media. Connect with the Conservancy on Facebook and Instagram ([@wvhighlandsconservancy](https://www.facebook.com/wvhighlandsconservancy)).

## West Virginia Highlands Conservancy Online Store Catalog

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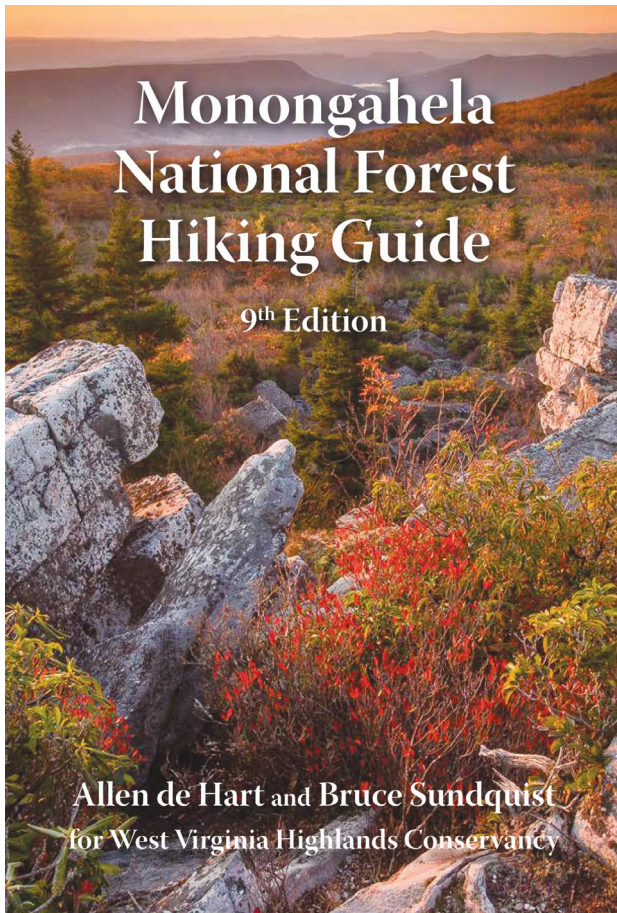
### Books

- **Monongahela National Forest Hiking Guide, 9th Edition:** \$21.95
- **Fighting to Protect the Highlands:** \$15.95

**To order by mail** make checks payable to West Virginia Highlands Conservancy and send to P.O. Box 306, Charleston, WV 25321. Please indicate the item and relevant color and size if applicable. To view and purchase store items online, visit [wvhighlands.org](https://www.wvhighlands.org)



## Hit the trails with our Mon National Forest Hiking Guide



Celebrating the 50th anniversary of the West Virginia Highlands Conservancy, the new edition of the treasured guide to every trail in the Monongahela National Forest features brand-new topographic maps and Kent Mason's gorgeous photos, all in color.

The Guide has been updated with the cooperation of National Forest District Rangers and Recreation Specialists to reflect changes in the past ten years:

- newly designated wilderness areas
- new trails near campgrounds and sites of special significance
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- ratings for difficulty, scenery, access to water, and much else

The definitive guide to the Mon adds a wealth of information about history, wildlife, and botany; safety, preparation, and weather; horseback and mountain bike riding and cross-country skiing; as well as sources of further information on the Forest and its environs.

The Monongahela National Forest has long been known as a 'Special Place.' The hiking, backpacking, and cross-country skiing opportunities it provides are among the best in the eastern U.S. New wilderness and backcountry trails have been added to the outstanding areas we have appreciated for decades – Otter Creek Wilderness, Dolly Sods Wilderness, Flatrock Plains, Roaring Plains, Blackwater Canyon, Spruce Knob, North Fork Mountain, Shaver's Mountain, Laurel Fork Wilderness, Cranberry Wilderness -- and there are lesser-known gems to be found in between.

Profits from the sale of these guides support a wide variety of worthy environmental projects for the West Virginia Highlands Conservancy.

**Send \$18.95 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)**

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