



FALL/WINTER 2021

OUR OHIO NATURE

Restoration in the Cuyahoga Valley National Park

Rebuilding Streams Raises Knowledge—and Hope

All told, more than three miles of headwater streams located within the Cuyahoga Valley National Park on Cleveland Metroparks' property is being restored by The Nature Conservancy with the help of American Conservation Experience (ACE). The service-focused organization provides work opportunities in the outdoors for young adults to explore and improve public lands while gaining practical professional experience.

Stream restoration often relies on experts with highly specialized skills and years of experience, detailed engineering and design plans, and significant funding. But for Andrew Bishop, northeast Ohio restoration manager

for The Nature Conservancy, that just wasn't in the cards. "We're pursuing a different path to stabilize and improve these headwater streams, and for good reasons," says Bishop.

The Cuyahoga Valley National Park shelters a mosaic of habitats, including forests, wetlands, lakes and ponds, grasslands and prairies. Because of the forest's maturity and species composition—tall hickory and oak trees that cradle American hornbeam and witch-hazel trees beneath their canopy—it would be detrimental to move large machinery into the forest to restore its degraded streams, as well as being cost-prohibitive for TNC.

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The Nature Conservancy is a private, non-profit 501(c)(3) international membership organization. Its mission is to conserve the lands and waters on which all life depends.

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Director's Message

“In the end we will conserve only what we love; we will love only what we understand; and we will understand only what we are taught.”

You probably have heard this poignant statement by Senegalese forestry engineer, Baba Dioum, pulled from a conservation paper he first presented more than five decades ago.

I would add that we can only be taught as much as we are open to learning. While teachers and their lessons are certainly important, so are the students.

There is always more to learn in life. And, while humbling, it can be incredibly freeing, whether you are a young student, a subject expert, or an established leader, to have the humility and openness to recognize that every experience and person has something to teach us.

With this student mind, I recently volunteered for the “human beaver” stream restoration project in the Cuyahoga Valley National Park (page 1). This opportunity grabbed my attention because of its creative title, beautiful location, and the chance to learn alongside a

tremendous group of young conservationists. Leading up to the event, we shared jokes about sharpening our incisors in preparation for the day. Like much of our work, what it really took to be successful were an open mind and a strong back. The day I participated was one of my most rewarding, for both mind and body, that I have had in over a year.

In this issue, you will learn more about our work to train teachers in nature education and provide outreach through our nature center. And you will be offered a Nature Lab Activity that gives you a sense of how we are reaching more young people through interactive nature education.

In this spirit of striving to be both inspiring teachers and fantastic students, we are pleased to share this issue of *Our Ohio Nature*. We greatly appreciate all that you are doing in your own lives, and through your support of The Nature Conservancy, to foster a love for nature and conservation. Thank you!

“In the end we will conserve only what we love;
we will love only what we understand; and we
will understand only what we are taught.”

—BABA DIOUM, Senegalese forestry engineer

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42.8
trees preserved
for the future



3,197.8 gallons
water saved



6,206.6 lbs.
CO₂ prevented



RESTORATION IN THE CUYAHOGA VALLEY NATIONAL PARK CONTINUED FROM COVER

Over the summer, Bishop worked with ACE members to design, develop and install over 160 engineered log jams to mimic the woody debris naturally found in high-quality headwater streams.

“Each structure was an opportunity for the ACE crew to observe and construct, which is a brilliant method of learning,” says Julie Bingham, a restoration biologist and partner on the project. “It lights the flame of applied ingenuity that is so difficult to instill in a traditional classroom. It was a pleasure to witness the evolution of their creations over the duration of the project.”

The ecological benefits of the restoration effort, which Bishop has playfully coined the “human beaver” project, are numerous. “This solution provides a way to slow down water and bring the stream back up to a level that will allow it to flood into the floodplain, which not only reduces erosion and sediment transportation but benefits the trees as well,” explains Bishop. The log jams will also generate riffles and pools in the stream, creating better habitat for aquatic life.

“I like that it can be deployed at scale,” adds Bishop. “If you think about typical stream restoration or watershed impairment, we’d be talking about it costing hundreds of thousands or millions of dollars. For much less, we’ve been able to stabilize over 10,000 feet of stream and reduce nutrients entering the Cuyahoga River and Lake Erie.”

“People are the magic recipe here. You don’t need to be a big organization or have millions of dollars to make an impact.”

—ANDREW BISHOP, northeast Ohio restoration manager for The Nature Conservancy

“But there are other benefits too,” Bishop continues. “Apart from being so cost-effective, I love this project because people are the magic recipe here. You don’t need to be a big organization or have millions of dollars to make an impact. While we could have contracted out this work, we instead chose to partner with ACE.”

Bishop met with ACE members almost weekly during the summer, having team meetings and getting feedback—time well spent for Bishop, who sees the investment as grounding. “It keeps me close to the action. It’s about training and engaging with the next generation of land stewards. This work is meaningful, and it sticks with people in ways that watching a tutorial or seeing a presentation do not.”

Throughout northeast Ohio, these log jams work best in fairly small headwater streams. Bishop notes there are tens of thousands of streams like this in the Cuyahoga watershed and the state. “It can be easy to focus on the negative: the damage, and the work that will be needed across a large scale to improve our streams. But when I think about the opportunity for impact, both for our waters and young adults and partners interested in implementing cost-effective stream restoration, it’s easy to be hopeful.”



➔ **LEARN MORE** about this project, including a video highlight of the stream restoration at nature.org/engagingohioyouth.

Conservation Highlights

NATURE-BASED PROGRAMMING continues at the Grand River Conservation campus

Operating a nature center during a global pandemic might be discouraging to some. But for Nature Conservancy staff members Marcel Weigand, a former Peace Corps volunteer, and Marten Schreiber, a retired engineer, resilience and reinvention are part of who they are. Together, they run the Dr. James J. Bissell Nature Center. The property that houses the nature center has its own storied history, from supporting a cattle and swine farm in the 1850s to later serving as a private family retreat, after which it became a summer camp that provided a welcome respite for thousands of visitors over many decades.

Today, it's the heart of TNC's plan to make the surrounding Grand River Conservation Campus a hub for conservation education. And throughout 2020 and 2021, that has meant adapting. From March to July of this year, a series of virtual programs invited hundreds of

people into the worlds of vernal pools and pollinator gardens and introduced participants to Ohio birds, damselflies and dragonflies, along with 'comeback critters'—wildlife like otters and bears that are regaining a foothold in some parts of the state.

With the anticipated future return of in-person programming, new amenities are planned, thanks to generous funding from the Civic Development Corporation of Ashtabula County and the Capital Budget Bill. These include renovations to the shed next to Bliss Pond, which will allow the storage of microscopes and plankton nets and serve as a backdrop for outdoor science experiments, and a new classroom in the space currently used as offices. These and other upgrades will contribute to Weigand and Schreiber's vision to inspire people for nature in this beautiful and irreplaceable setting.



“This is the first time I’ve looked at the park through the lens of science and ecology...to see the same sights so differently and realize just how truly unique this area is.”

—MIKE DICK
High school teacher, Maumee City Schools

TEACHER WORKSHOP in the Oak Openings brings the outdoors in

In summer 2021, dozens of teachers toured natural areas in the Oak Openings Region during a workshop to learn how to incorporate the unique local ecology into their classrooms. Their adventure was supported by an Ohio Environmental Education Foundation grant. For decades, TNC has worked to protect this globally significant natural area at places like its Kitty Todd Preserve and in partnership with others through the Green Ribbon Initiative. The region has a splendid array of rare habitat types, from dry and sandy barrens to wet prairies and forest communities, so protection and

restoration efforts here have an outsized impact on countless species.

The workshop, led by TNC staff with support from Metroparks Toledo and the Lucas Soil and Water Conservation District, sought to create an immersive experience for local teachers. Their knowledge will reverberate throughout classrooms this year, impacting hundreds of students by revealing the region's uncommon and special natural treasures—and hopefully—inspiring an enhanced sense of place and appreciation for its conservation.



Science Spotlight

TNC WELCOMES NEW OHIO TRUSTEES



JIM SAMUEL is the principal of Capitol Integrity Group, a strategic consultancy whose expertise includes energy, natural resources, manufacturing, economic development, and infrastructure. Jim also heads up the Ohio Water Partnership and is a current member of the Energy & Environment Committee in the Ohio Chamber of Commerce. Jim and his wife, Heidi, have two children and split their time between Columbus and their wooded property in Lynx, Ohio. Jim describes it as “the edge of The Edge” given its proximity to TNC’s Richard and Lucile Durrell Edge of Appalachia Preserve System.



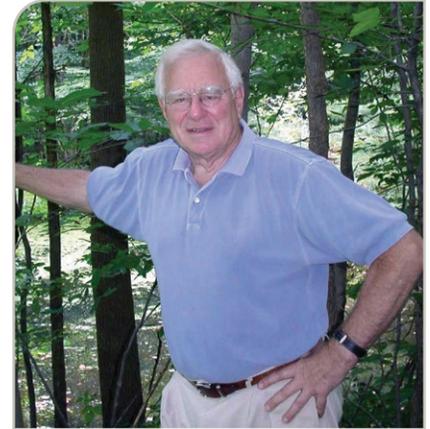
EMILY SMITH is a senior vice president of PR and media relations at Huntington. Her prior experience spans professional sports, financial services, higher education and a decade in state government. Emily’s participation in 4-H in her youth and summers spent in a canoe fostered her passion for environmental education and conservation. Today, Emily and her husband, Stuart, live in Clintonville. Together with their grown daughter, they are strong allies of the LGBTQ+ community and are committed to doing their part to help address social, racial and environmental inequalities.



GARY SPITZNOGLE is Vice President of Environmental Services for American Electric Power. Since joining AEP in 1997, he has held a variety of roles, many related to research and development to improve the environmental performance of AEP’s power generation facilities. He played instrumental roles in AEP’s programs to pursue Integrated Gasification and Combined Cycle and Carbon Capture and Storage technologies, and has served as technical lead on state and federal policy issues on power generation and carbon dioxide emissions reduction. Gary resides in Columbus with his wife, Lynette.



FRED YODER has been farming for nearly 40 years in the Plain City area. In the late 1970s, he began working with the local DeKalb dealer, later becoming owner and operator of the dealership. Today he serves as chairman of a family business he started with his son and daughter, Yoder Ag Services. In addition to the seed business, Fred farms with his family and raises corn, soybeans, and wheat on about 1,500 acres in Madison and Union counties. Fred has worked with many organizations and served on the Ohio Corn Growers Association Board of Directors, and continues to work with groups to find solutions to feed a hungry world sustainably.



Bill Ginn © TNC

**Eagle Scout.
Veteran. Lawyer.
Advocate.
Civic leader.**

.....
PAYING TRIBUTE

Bill Ginn
.....

William (Bill) Ginn earned many titles in his lifetime. At TNC, we referred to him as trustee, philanthropist, and friend. Bill was firm and kind, and he pushed us to think big and to embrace bold action. He served as a board member for the Ohio chapter from 1988 to 1998 and then as an honorary life trustee until his passing in June of this year. But Bill didn’t just voice support for the environment; he funded it too, contributing to TNC’s work for more than 40 years. This generosity included a personal passion of his—acquiring Snow Lake in northeast Ohio. Bill tirelessly advocated to purchase the property adjacent to existing TNC-owned lands to ensure the long-term protection of the pristine glacially formed kettle hole lake and surrounding lands that together form the headwaters of the Cuyahoga River. We will forever benefit from and be grateful for Bill’s many lasting contributions to conservation. 🌿

By the Numbers

Despite the many changes we have experienced this year and last, The Nature Conservancy continues to conserve the lands and waters on which all life depends. Thanks to the steadfast support of members like you, we are proud to report several additional achievements since we checked in last spring.

3,830

ACRES NATURAL AREAS MANAGED from July 2020 through June 2021, from invasive species treatments to site preparation for bat habitat improvements



1,387

OBSERVATIONS OF NATURE made during the City Nature Challenge led by TNC staff in April



330K

AND COUNTING: VIEWS OF THE SNOWY OWL VIDEO, the first collaborative content produced by TNC and YouTube Channel, Brave Wilderness



324

LETTERS SENT BY TNC SUPPORTERS to Ohio Senators and Representatives to vote NO on S.B. 52, a policy that makes it even more difficult to site renewable energy projects in Ohio



182

FEET OF NEW STAIRCASE that guides visitors to the upgraded and iconic Buzzardroost overlook at the Richard and Lucile Durrell Edge of Appalachia Preserve



2,044

ACRES NOW PROTECTED at Morgan Swamp Preserve, thanks to the latest acquisition, which closed in January of this year

603

PEOPLE WHO PARTICIPATED in the annual Blue Week events in May 2021, celebrating the Oak Openings Region



2,969

HOURS LOGGED BY VOLUNTEERS in fiscal year 2021 to steward natural areas throughout the state

THIS PAGE CLOCKWISE FROM TOP LEFT Binoculars © Maltiaze/iStock; Laptop © YesFoxy/Creative Market; Painted trillium © Brian Yurasits/Unsplash; Garden gloves © Pimpay/iStock; Boot prints © Sadora/iStock; Snowy owl © Yaron Schmid, YS Wildlife Photography



Nature Lab is a robust and engaging online platform developed by TNC for parents and educators, so that young people can confront the urgent and complex challenges facing the planet. Nature Lab helps youth learn about conserving nature for its own sake and for its ability to fulfill their needs and enrich their lives. Visit nature.org/naturelab to access lesson plans with interactive worksheets, videos and hands-on projects.

Cut out this page and participate in this fun Nature Lab activity!

SCIENCE AT HOME: RAINWATER FILTRATION

Experimental question

How do paved areas impact rainwater filtration?

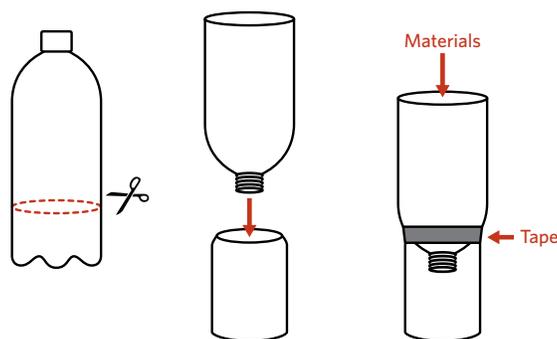
Materials

- 2 soda bottles with bottom removed
- 2 large jars about the same diameter as the soda bottles
- Duct tape
- Handful of horticultural moss
- Handful of dried leaves
- Bag of sand
- Bag of gravel
- Several pieces of concrete
- Old newspaper
- Old plastic cups
- Garden soil
- Bucket
- Tap water
- Vegetable oil
- 1-liter pouring jug
- Timer
- Ruler

Procedure

1. Construct two funnels with the soda bottles by inverting them over the jars. Use duct tape to secure the soda bottles to the jars.
2. Mix together a handful or so each of the garden soil, sand, gravel, leaves and moss. The quantities are not important, but try to keep the amounts of each material about equal. Save a small handful of moss for the next step.
3. Place the small handful of moss in the neck of the funnel. Add the mixture to the funnel. Ensure the material is packed firmly but not too tightly. This funnel represents the soil through which water filters in natural areas.
4. In the other funnel, place the pieces of concrete, to the same volume as the soil-filled funnel. Loosely crumple the old newspaper into various sized pieces and crush the plastic cups. Add the newspaper and plastic cups into the funnel. This funnel represents areas across which water drains in paved areas. The newspaper and cups represent trash which may collect in the drains of paved areas.
5. Mix together a small amount of the garden soil with 2 liters of water and add two cups of the vegetable oil.
6. Add 1 liter of this mixture to the pouring jug.
7. Pour the mixture into the soil-filled funnel. Time how long it takes for the water to drain through, and record your observations. Measure the height of the oil layer that rises to the top of the water once it has filtered through.
8. Repeat the above step on the funnel filled with pieces of concrete.

STEP 1 → STEP 2 → STEP 3



In this activity, you will learn the importance of natural areas that serve as giant filters to produce clean water for people and nature to use. Natural areas work to filter and slowly release water over time. In this way, the soil, sand, rock and even leaves reduce the need for costly filtering treatments and help to prevent devastating floods. Surfaces where water can penetrate are permeable, and impervious surfaces, like rooftops, paved roadways and sidewalks, are surfaces where water cannot penetrate.

As impervious surfaces increase in urban areas, less natural water filtration occurs, contributing to pollution in urban watersheds. When it rains, pollutants like car oil, fertilizers, detergents and pesticides get carried with the rainwater into streams and lakes where we like to play. Yuck!

FALL/WINTER 2021

OUR OHIO NATURE



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Leave a legacy for generations to come.

What better legacy is there to leave than your commitment to protecting the Earth for generations to come? Whether you are taking those first steps toward planning your estate or are in the process of updating your estate plan, The Nature Conservancy is here to help. Don't let another day pass by.

Contact Alan Monroe with The Nature Conservancy in Ohio at:

 (614) 967-8877

 alan.monroe@tnc.org

 nature.org/legacy



THE NATURE CONSERVANCY CANNOT RENDER TAX OR LEGAL ADVICE. PLEASE CONSULT YOUR FINANCIAL ADVISOR BEFORE MAKING A GIFT. PHOBQ22FY0ZAPGH0XX



ON THIN ICE

While the Great Lakes and the Mississippi River grow the crops that feed the world, a changing climate has pushed these rivers and lakes to the brink. Explore a new story map that explains why and how we are charting a course forward.

Dive in at nature.org/midwestwater.