The Arc of Appalachia

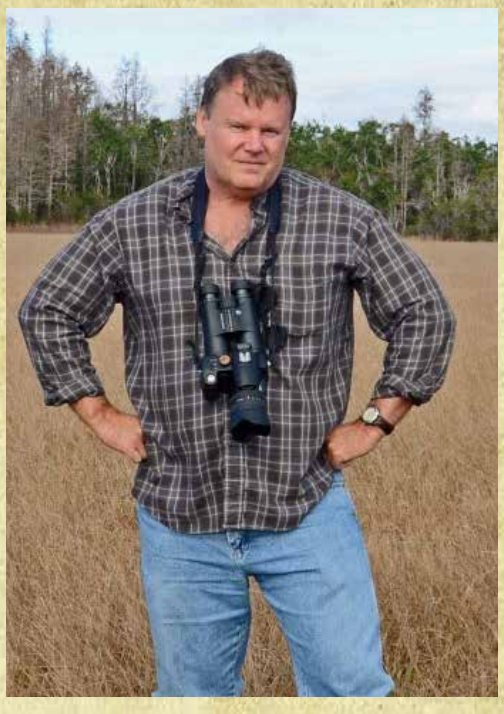
2023 - 2024

k o s m o s

in the rain, an ancient snapping turtle slides through a vernal pool

photo by Sam James

FEATURED
ARTIST-PHOTOGRAPHERS



Jim McCormac

With each annual magazine, it is our privilege to feature one or two of our photographic artists who make our magazine a top-shelf expression of the confluence of natural history and human artistry. This year we are proud to highlight the work of Jim McCormac. Jim is an incredibly sought-after naturalist in Ohio. He writes articles for the *Columbus Dispatch, is an accomplisghed speaker,* and publishes a nature blog at jimmccormac.blogspot.com.

His nature photography is prolific and stunning, as you can see for yourself at jimmccormac.com. In addition to leading field trips, birding outings, and photography courses, Jim has authored several books, including *Wild Ohio*, *Great Lakes Nature Guide*, and *Birds of Ohio*. His newest book is *Gardening for Moths: Ohio and the Midwest*, published by the Ohio University Press, which was released to the public earlier this year with high acclaim.

Jim is the consummate naturalist. He has spent his life capturing the wonders of nature in words and photos, and he uses them to encourage others to pursue deeper relationships with the natural world.

Samuel James

Sam James is a photographic artist from southern Ohio whose works grace our opening essay and both covers of the magazine. In recent years, his art has focused on the study, documentation and conservation of biodiversity in North America's Eastern Forest. He has also worked extensively in the tropical wetlands of Nigeria's Niger Delta and the desert Southwest.

Sam is the recipient of the International Center for Photography's Infinity Award, the Overseas Press Club's Olivier Rebbot Award, and an Artist's Fellowship from the New York Foundation for the Arts, among other distinctions.

His images of fireflies and spiders are featured in Werner Herzog's film, *Theatre of Thought,* and a selection of his photographs of the forest at night was showcased at the Cincinnati Museum Center's Museum of Natural History & Science. His award-winning book *Nightairs*, about the bioluminescent flash codes of fireflies, was published in June. Below: *photo of Sam by Stacey Clarkson James.*

ARC OF APPALACHIA

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Below: Glacial rivers from above create some of Nature's most stirring art

underground rivers

This essay is adapted from a presentation at the September 2023 Donor Gathering delivered by Arc Director, Nancy Stranahan.

Hello Everyone! Welcome to the Arc's newest preserve, Honeycomb Rocks. Today we are standing in the charismatic sandstone country of Hocking Hills. You may be surprised to hear that this is only the second time in nearly 30 years that we have held a Donor Gathering above sandstone and shale, instead of above the dolomite and limestone bedrocks of our nonprofit's place of origin in south-central Ohio.

It's easy for most people to lose track of the "background music" of something as immense and enduring as the bedrock beneath our feet. And yet, such details of where we live are of immense importance. Our geography helps sculpt who we are in deep and profound ways.

When I was in my late 30s, fortune led me to settle down on Cave Road in a particularly dramatic karst country landscape, complete with grottos, stone arches, sinkholes, and caves. This was the same spot where the Highlands Nature Sanctuary would be founded just a year later.

Whenever it rained on Cave Road, the water would quickly vanish from sight, only hinting its presence in cold scattered springs and seeps. In certain places, entire streams would suddenly vanish below ground, sometimes to rise again, sometimes not. The waters remained mostly hidden, moving in underground currents far below th surface in the inky darkness.

Living on Cave Road was basically like living on gravel. It was high and dry except after an exceptionally heavy rain, the kind of rain you get only once in a decade. Then the underground waters would suddenly spring to the surface, revealing their full power as gushing waterfalls and whitewater streams. After just a few hours of such exuberance, the waters would vanish once again, receding back underground.

Living in karst country these last 30 years has left its signature on my soul. The landscape has invited me to think more deeply; to ponder the buried, the invisible, the intangible.

Hocking Hills is very, very different from Highland County's karst country, even though both are breathtakingly beautiful. The exposed bedrock at Honeycomb Rocks is straight forward, unequivocal, ponderous, and imposing. It is so "in one's face" it is impossible to fail to notice it. And in Hocking Hills, the water, for the most part, behaves itself.

It is deeply fulfilling today to be surrounded by so many people who, although you may not know each other,

Below: Groundwater seep rising through dolomite bedrock at the Arc's Cliff Run Preserve. Photo by Nancy Stranahan

still conjure up a feeling of relatedness. It seems to me that those of us who are connected with the Arc are also, in some inscrutable way, connected to each other - like an extended family.

In contemplating the notion of "family," I journey back to my own blue-collar family roots in a small town in the industrial shadow of Cleveland. I had the best parents imaginable. They taught me the essential qualities of adulthood, including the virtues of hard work, honesty, and the belief that each person could and should reach for the stars. But despite their devotion, the feeling of belonging eluded me. I couldn't help but feel that I was one step off-beat from my culture. Strong opinions and restless ideas that were not in alignment with my family or the dominant culture disoriented me. Even at a young age, I had to wonder, "If not from my family, then where do these convictions come from?" It was a mystery I carried unanswered, right on through my 70th year of life.

Last summer I picked up two books that would prove transformational – *The Magnificent Rebels*, by Andrea A. Wulf, and *The Invention of Nature: Alexander von Humboldt's New World* by the same author. Wulf is a researcher-historian-novelist who has committed herself to bringing forgotten human stories back to life.

Remembering our past is important. I like to think that our relationship to human history is similar to the one we have with the bedrock beneath our feet – we afford little attention to it even though it supports us and gives us context every moment of our lives. When we become conscious of our history, it is like when Dorothy pulled back the curtain on the Wizard of Oz and discovered whose hands were on the controls. History explains so much about who we are. I wish to thank and acknowledge Andrea Wulf for most of the history recounted in this article.

The era for both of Wulf's books begins in the last decade of the 18th century. Center stage was the small university town of Jena, located in Saxe-Weimar in what is now Germany. At that time, Saxe-Weimar was one of many contentious principalities comprising the Holy Roman Empire, and it was a small one at that. Although this story took place only 225 years ago, the human environment of those times is almost incomprehensible to modern day consciousness. Control of the common man by the monarchy was absolute and citizens were little more than chattel. People couldn't change jobs, create an enterprise, move towns, cross the border, or, in some cases, even marry, without the approval of the monarch.

In this incredibly constrained world setting, two explosive events had recently occurred, and one was about to. The first was the founding of the American Republic in 1776, based on the ideals of equality, and the consequent rapid rise of an economically free and prosperous middle

Photographic essay: a southern Ohio morning's dew-drenched meadow, and the artistic marriage of silk, water, and light

When we contemplate the whole globe as one great dewdrop, striped and dotted with continents and islands, flying through space with other stars all singing and shining together as one, the whole universe appears as an infinite storm of beauty. - John Muir

class. The fledgling government acknowledged that among mankind's certain unalienable rights were those of "Life, Liberty and the pursuit of Happiness." This were radical ideas. The Old World watched the foundling nation with varying degrees of shock, suspicion, curiosity, and marvel.

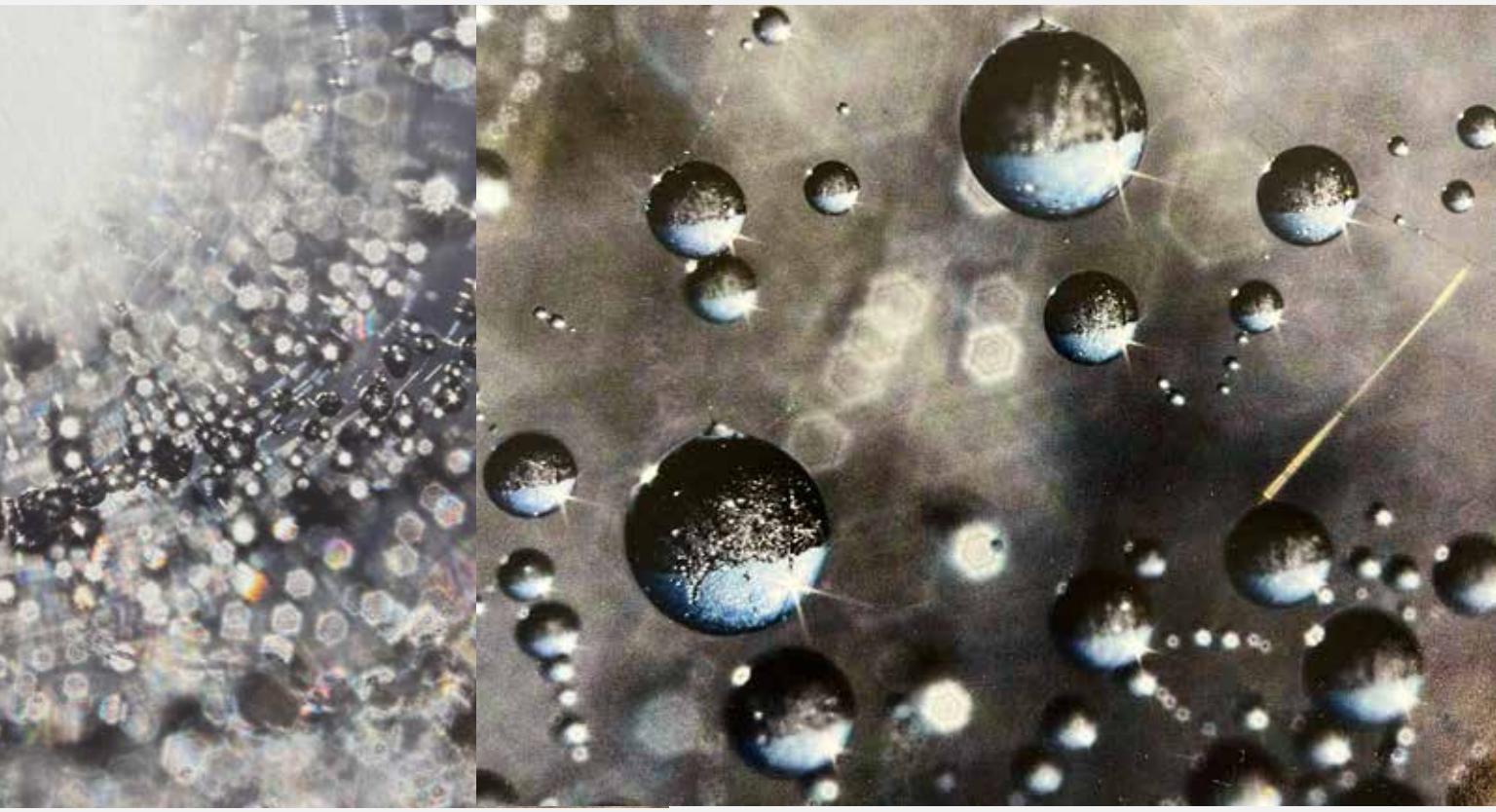
The second explosion was the French Revolution in 1789, when the common man rose up against the all-powerful monarchy, proclaiming humanity's native right to liberty, equality, and fraternity. Much blood was spilled.

The third explosion was about to occur in Jena, population 4,000. At that time, Jena was arguably the only liberal university on the continent, thanks to its quirky fate of being under four rulers instead of one, and thus outside the control of any of them. Many of its instructors and students had fallen under the spell of Johann Wolfgang Goethe, Europe's greatest philosopher, beloved poet, and part-time Jena resident. Jena was a magnet for free thinkers on a continent where civil freedom was for most, beyond reach.

In the late 1800s, the literacy rate of German-speaking people was the highest on the continent. It was possible to find even common citizens discussing philosophical ideas that they had ingested from the writings of Kant and his contemporaries. But nowhere were ideas more energetically debated than in Jena. In its crowded pubs, fortified by cheap liquor, students engaged in deep discussions into the wee hours of the morning. By day they jammed the lecture rooms of their favorite instructors. For a professor by the name of Johann Gottleib Fichte, a firebrand who gave riveting speeches on the primacy of the individual and the necessity of free will, lecture halls were sometimes standing room only. Fichte's rapt students knew that speeches of his sort were powerful enough to tear down castle walls, and the notion excited them. It was palpable to everyone that Europe was on the cusp of revolutionary change. The residents of Jena sensed they were in the center of it all.

As the 18th century waned, fate found a number of young intellectuals wending their way to Jena and thus into each other's orbits. Some came as teachers, students, residents, and, in some cases, passing visitors, but they formed deep and immediate bonds. From the impulses of their own souls and the sparks that ignited between them, together this Jena set created a lasting philosophical heritage. Among those who belonged to this stellar group were Johann Wolfgang Goethe, Johann Gottlieb Fichte, Georg Hegel, Alexander von Humboldt, Friedrich Schiller,

as constructed by the bowl and doily spider, Frontinella pyramitela.. Photos by Sam James. Middle photo has been detailed.



the poet Novalis, Friedrich Schelling, and Caroline Schelling, the latter serving as the friends' primary organizing force.

Even though they were only to share a few precious years together, their fraternity resulted in a philosophical solar flare – short in duration, but brilliant in its aftereffects. By 1799, von Humboldt was already sailing under the Spanish flag to explore South America. A few years later, the remaining members of the Jena set had been largely torn apart by family and world events, and, perhaps inevitably, developing issues of jealousy, competitiveness, and shifting sexual alliances. And then, in 1806, Jena became the happenstance theater of the battle between Prussia and France, a Napoleon-won war which caused much destruction and served to snuff out Jena's intellectual light for some time, while scattering many of its inhabitants.

But before these headstrong radicals dispersed into the world to face their various fortunes and misfortunes, they wrote and published the essays that founded a world-altering philosophy known today as Romanticism.

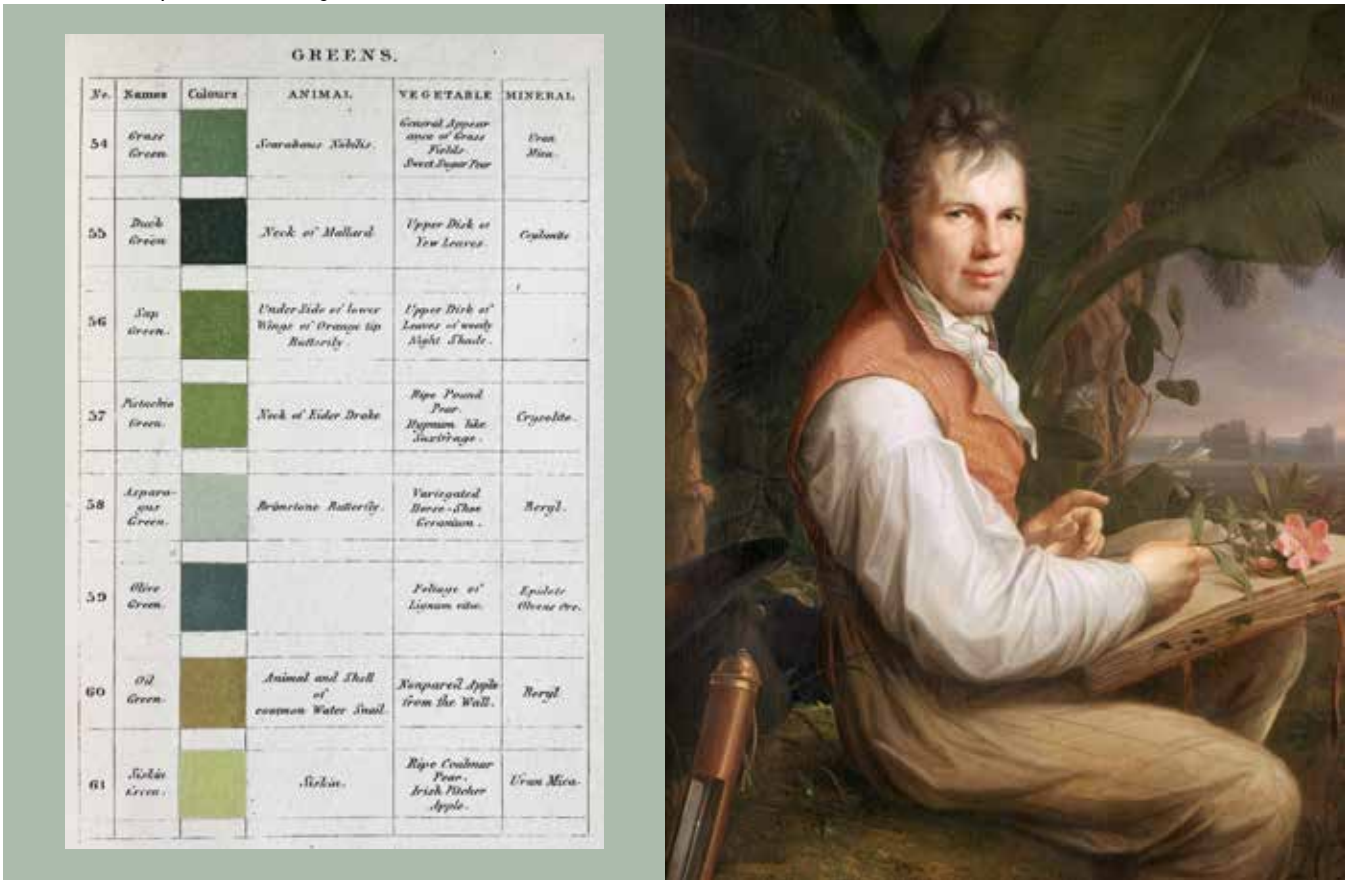
The Jena writings were so brilliant and outrageous that they engaged and inspired artists and thinkers across the continent. Eager to read the Jena materials first hand, learning the German language became a mania for a time among English poets and philosophers. The great Romanticists of Great Britain who owed their inspiration to the Jena set would eventually include Samuel Taylor Coleridge, William Wordsworth, Percy Bysshe Shelley, Thomas Carlyle, Lord Byron, and William Blake.

When Alexander von Humboldt returned from his overseas explorations in 1804, he compiled his discoveries and perspectives in a number of articles and books, the most hefty being a five-volume series titled *Kosmos*. The *Kosmos* series proved to be as transformative for scientists as Jena's essays and lectures were to poets and philosophers. One could find the *Kosmos* volumes in Charles Darwin's book collection, and he poured over their contents as he prepared for his own historic ocean voyage.

To understand the Romantic Movement, one has to recapture the mood of the period in which it arose. After being restrained by religion for so long, the Jena period coincided with a time in history when humankind's fascination for science; and its yearning to explore, measure, and make sense of the world had become nearly unshackled.

In the Middle Ages, the universe was believed to be God-ordered. The cosmos was a mystery that was unfathomable, uncontrollable and undecipherable. Nature was viewed as a fallen realm, far below the heavenly spheres. To study nature was to flirt with the seductions of embodiment and other devilish temptations. It was reasonable then to believe that Earth was a place where men and women's lots were also set by God at birth. In this world view, human happiness was largely unachievable and misery assured. Citizens' lives were ordered and governed by a privileged few, and untreatable diseases and misfortunes awaited them around every corner. A person's only hope for peace was to live a moral life, escape the

Left: Adapted from Abraham Gottlob Werner's *Nomenclature of Colours*, published in 1814, later translated into English by Patrick Syme, painter of flowers, in 1821. It was the first time colors have ever been described by science, their names arising from the hues of the natural world. Werner was a famous geological lecturer whose theories deeply influenced Goethe, Novalis, and von Humboldt. Right: Portrait of von Humboldt by Friedrich Georg Weitsch in 1806.



GREENS.

No.	Names	Colours	ANIMAL	VEGETABLE	MINERAL
54	Grass Green.		Scarabæus Nobilis.	General Appearance of Grass Fields. Sweet Sugar Pear	Uran Mica.
55	Duck Green.		Neck of Mallard.	Upper Disk of Yew Leaves.	Cyanite.
56	Sap Green.		Under Side of lower Wings of Orange tip Butterfly.	Upper Disk of Leaves of early Night Shade.	
57	Pistachio Green.		Neck of Eider Drake.	Ripe Pound Pear. Hypnum like Saxifrage.	Crysolite.
58	Asparagus Green.		Brimstone Butterfly.	Variegated Horse-Shoe Geranium.	Beryl.
59	Olive Green.			Foliage of Ligneum vitæ.	Epidote Olivene &c.
60	Oil Green.		Animal and Shell of common Water Snail.	Nonpareil Apple from the Wall.	Beryl.
61	Verdit Green.		Merlin.	Ripe Coulmar Pear. Irish Pitcher Apple.	Uran Mica.

earth at death, and find one's true home in the afterlife. For many, the pursuit of happiness was not even a remote possibility.

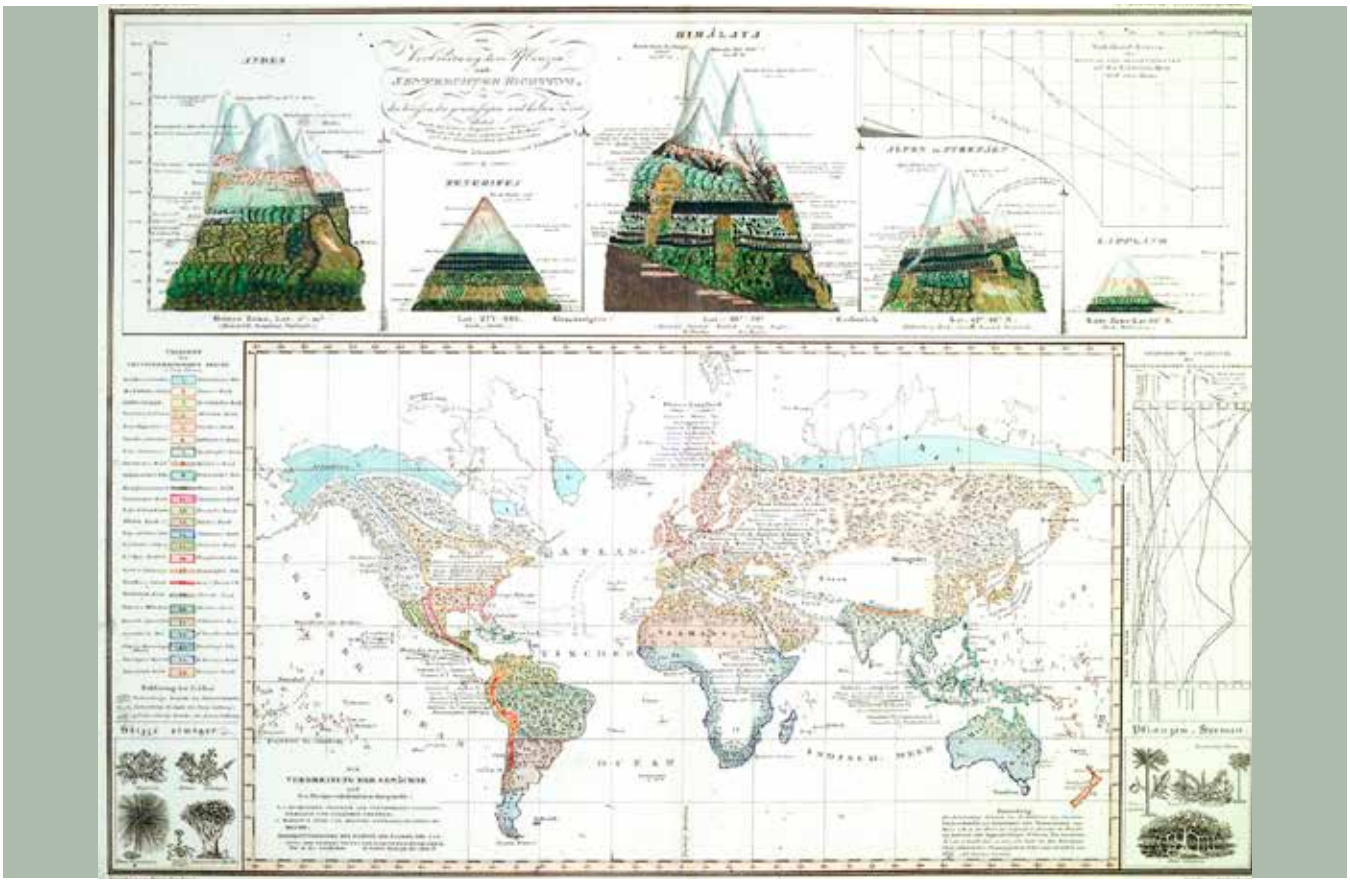
By the time the Jena story unfolded, Europeans had been seriously questioning these premises for over a century. A brave new world beckoned, one that encouraged humanity to explore the underlying principles and forces that governed the universe, freed from the punitive arm of the church and the tug of conscience. If nature's laws could be deduced, humanity would be able to harness nature's powers for human comfort, security, and even the pursuit of happiness. Earth was no longer presumed fallen, but it wasn't sacred, either. Rather, it was believed by most to be mechanistic, as fathomable and benign as a clock. Anyone who could figure out what made that clock tick, could direct human destiny. The realms of religion and science, never united, were going further in their separate ways.

The Jena set vigorously protested this mechanistic view. Many of them were enthusiastic scientists of their time, procuring the latest technological devices to measure the world around them and explore universal principles and patterns. Among the group were ardent botanists, anatomists, geologists, chemists, engineers and astronomers. But also among them, and often embodied in the same person, were playwrights, essayists, philosophers, artists, musicians, and poets. The Jena set believed that the mechanistic world view was deceptive and deadening to the human soul. They believed to progress toward the attainment of truth and wholeness, science had to be balanced with human intuition, the finer emotions, aesthetics, and artistic impulses. Nature could never be truly understood without marrying scientific inquiry with the humanities, and they recognized that art often foreshadowed what science later described.

The Jena friends believed the earth was not a mechanism but a single, unified, chaotic unity that was best understood by looking for holistic connections in the living world. Romanticists warned that science, without the benefit of human imagination, was like trying to learn about life by studying corpses. Without espousing any creed or aligning with any one religion, the Jena friends argued that nature was not spiritually fallen, nor a clock, but an open door to wisdom, beauty, artistic inspiration and ethics. An appropriate response to nature, they believed, was not just mental curiosity, but wonder and awe. Later in the century, their ideas led to the Romantic painters whose works featured stunningly beautiful landscapes that revealed nature, not in her fall, but in all of her beauty and perfection.

The Jena set did not believe in absolute knowledge. They believed that scientific and philosophic inquiry, coupled

Below: This meticulously illustrated painting by von Humboldt is the first ever interpretation of the interconnectedness between Old World and New World vegetation. The painting also showed the relatedness of the world's mountain vegetative ecotones as they shift dramatically with changes in altitude.



with insight and focused observation, revealed higher and higher truths over time. The hallmark of the pursuit of knowledge, then, was the acceptance that truth was ever evolving. And sure enough, as time passed, the content of the Jena set's writings and lectures grew, shifted, expanded, and matured. Truth was a force, not a destination.

William Wordsworth (1770–1850), a leading poet of the Romantic movement in England, perhaps expressed the Jena philosophy most succinctly in his poem, *Tables Turned*. Here he pleads with his readers to abandon the endless chatter of their minds, locked up as they are in ivory towers, and head outdoors where Nature, herself, could become their teacher. He wrote, "*Books! 'tis a dull and endless strife: Come, hear the woodland linnet, How sweet his music! On my life, there's more of wisdom in it.*" and, "*One impulse from a vernal wood may teach you more of man, of moral evil and of good, than all the sages can.*"

Inspired by Goethe and his Jena friends, Alexander von Humboldt, perhaps the most scientifically inclined of the group, also saw nature as a unified whole. He was the very first person to study and describe the world's botanical bio-regions. He carefully illustrated the changing vegetative zones as he ascended the slopes of South American volcanoes, noting that similar patterns of eco-regions existed on the mountain sides of Europe and Russia.

Notably, von Humboldt founded the science of plant geography and meteorology. He discovered the decreased intensity of the earth's magnetic field from the poles to the equator. He speculated on the changing position of continents and premised that Africa and South America were once connected. He was the first person to decry the environmental catastrophes resulting from humanity's intensive mining and agricultural activities in the New World. He was the first to present the concept that "*nature is perfect till man deforms it*" and he warned against human excesses. Alexander Von Humboldt was, indeed, the world's first conservationist and the world's first naturalist, integrating the sciences in order to achieve a holistic world view.

Jena's writings and von Humboldt's *Kosmos* eventually found their way across the Atlantic. They showed up on the bookshelves of the Transcendentalists and America's earliest conservationists, heavily influencing such luminaries as Ralph Waldo Emerson, George Perkins Marsh, Walt Whitman, Nathaniel Hawthorne, Edgar Allan Poe, Herman Melville, Henry David Thoreau, and John Muir.

America, though, had something that Europe did not. America still had wilderness - vast spaces untrammeled by man - that were occupied by complex and ancient natural communities still teeming with life. America, at least in the

West, had wildlands big enough to get lost in. In America, Romanticism found fertile ground in which to set deep roots. where it flourished and continued to evolve.

One person who resonated with the Jena set was Henry David Thoreau (1817 – 1862). He extolled and modeled a life of nature immersion and material simplicity, adding to Romanticism's ideals the monk-like pursuits of austerity and contemplation. He demonstrated that a person could accept the default of being a money-making machine and a consumer, or he or she could choose the more ethical path of Nature-immersion and live a life that was authentic, mentally engaging, and purposeful. He taught the radical notion that caring for nature and its diverse beings was a matter of moral obligation.

> I went to the woods because I wished to live deliberately, to confront only the essential facts of life, and see if I could not learn what it had to teach, and not, when I came to die, discover that I had not lived. - Henry David Thoreau

Thoreau's writings preceded the essays of other legendary writers on the theme of conservation ethics, such as Aldo Leopold, Thomas Berry, and modern day Robin Wall Kimmerer. Every time Thoreau went into the woods and gave nature his full attention, he came home enriched by nature's curriculum.

And then came remarkable John Muir (1838 – 1914), who demonstrated that living closely with nature not only conferred the benefits of knowledge, wisdom, and ethical realizations, but could elevate one's soul to states of spiritual ecstasy and enlightenment. Muir took the Romanticist notion of unity to its loftiest elevation.

Through Muir, the monastery was replaced by a forest wilderness, and religion escaped the bars of creed. Science and religion, so long divided, became married in the soul of a man on the side of a mountain - birthing something fresh and new.

Muir spent the latter years of his life committed to saving the mountain wilderness that had earlier saved him. And thus the American preservation movement was born, which, with some irony, was like a mighty wind that blew across the Atlantic to Europe, across the tiny town of Jena, and out into the larger world. Through the lens of Muir's soul and his writings, the wilderness landscapes and their majestic beauty had become sacred.

Many decades later, John Denver's lyrics to the song "Rocky Mountain High," mirrored Muir's wilderness experiences and were welcomed by millions of listeners:

"*He climbed cathedral mountains, he saw silver clouds below / He saw everything as far as you can see / And they say that he got crazy once and he tried to touch the sun / And he lost a friend but kept the memory.*" Romanticism never fully integrated itself into modern culture, but its influence became omnipresent.

Since Muir has passed, his writings have inspired uncountable numbers of nature lovers and nonprofits, of which the Arc of Appalachia is just one. The Arc, even though not fully conscious of its roots until now, has nevertheless been mirroring Romanticism's core principles since its inception with uncanny accuracy.

The macrocosm is embedded in the smallest microcosm. Above left: newly laid Ambystoma salamander egg (probably spotted) glows with promise and life. Above right: freshwater fairy shrimp ephemerally inhabiting a vernal pool. Both photos were taken at Tremper Mound Preserve's shallow marshes in early spring. Photos by Sam James. Note: photos have been detailed.

> When we try to pick out anything by itself, we find it hitched to everything else in the Universe. - John Muir

The Arc is similarly devoted to both science and art, and is committed to the idea that the two are equally indispensable for understanding our roles as Earth stewards. Unity is the Arc's byword, and we focus not just on saving species, but on the preservation of the ancient, complex natural communities that we believe are Earth's greatest creative achievements - nothing less than living art.

Our measurement of success for the natural communities in our care is "beauty, balance and biodiversity," and our service to humanity is the encouragement of "wonder, gratitude, and reciprocity." The Arc does not align with any religion or creed, but nevertheless assumes as a foundational principle the sacredness of all life.

Without realizing it, the Arc owes its drive and passion to a small group of young rebels in Jena, who, on their part, had never heard of the concept of wildlands preservation. It is clear that Romanticism remains a living evolving force.

I visualize the Romanticism movement as a river of consciousness that winds its way through the karst country of time. Sometimes it springs to the surface in force, as it did in Jena, sometimes it seeps to the surface without much notice. Other times it dives into the inky darkness and bides its time.

It is a river without beginning or end; and its course is unpredictable and ever changing. Its appearance in Jena was undoubtedly not the first time it surfaced. Would we even recognize the river's earlier expressions in history had they not been forgotten in time? I do not know, but I trust that this river and its risings are as old as time itself.

Returning to the question at the beginning of this article, "If not from family and mentors, then from where do our convictions come?" I now have an answer.

My home is a river. It is the current of consciousness that has always been the source of my deepest convictions.

I am blessed with two families, one given, one found. One family is my earthly biological one. My other is a river and the legions of entities bobbing along in that river, great and small, infamous and forgotten. Each one of us is brought to the surface for a time to sing songs of the river until the currents take us back under again.

The best thing about the river is that our songs are never sung alone, but in choruses that leap across the ages. Once one discovers their river, it is impossible to be alone, or to be deaf to its harmonies. It is a deep comfort.

I write of a good and powerful river, but it is not the only one. When any of us are honored to give a newborn a blessing, it might be lovely to include, "Dear one, before your life is over, may you find your river. And when your day comes, let its currents carry you home."

ARC OF APPALACHIA
2024
LAND PURSUITS

10 PROJECTS:

8 acquisitions

2 land donations

842 total acres

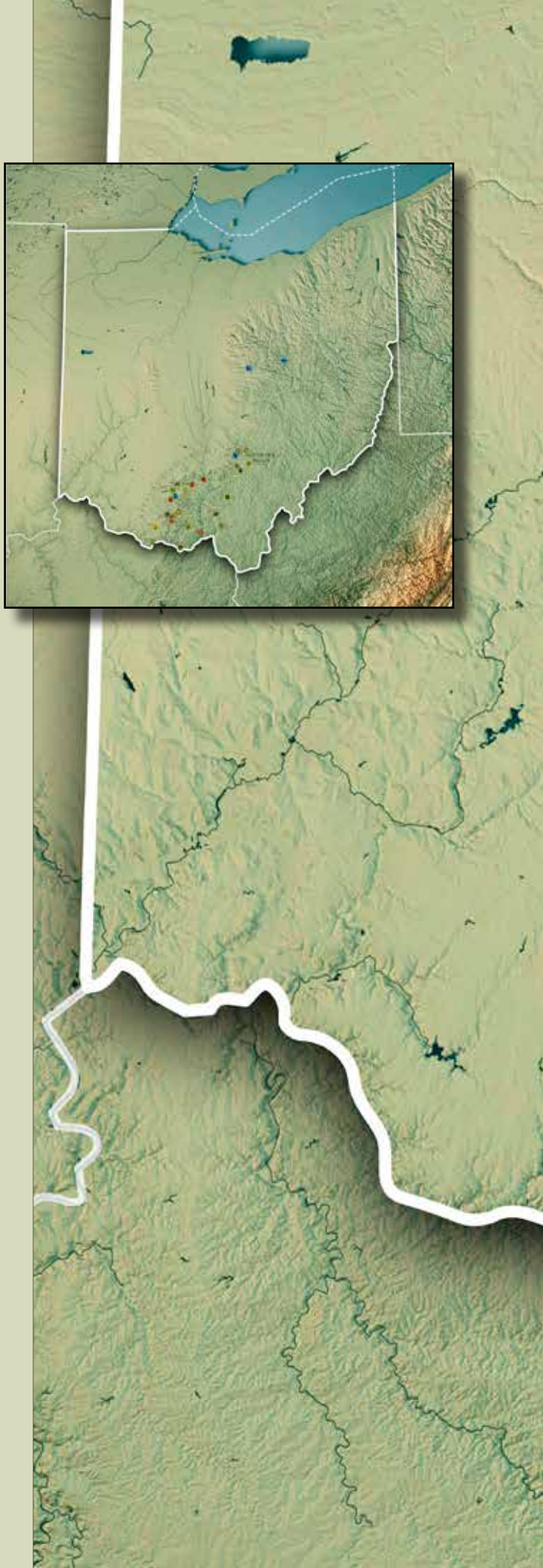
total cost: $3,352,000

balance still needed: $807,000

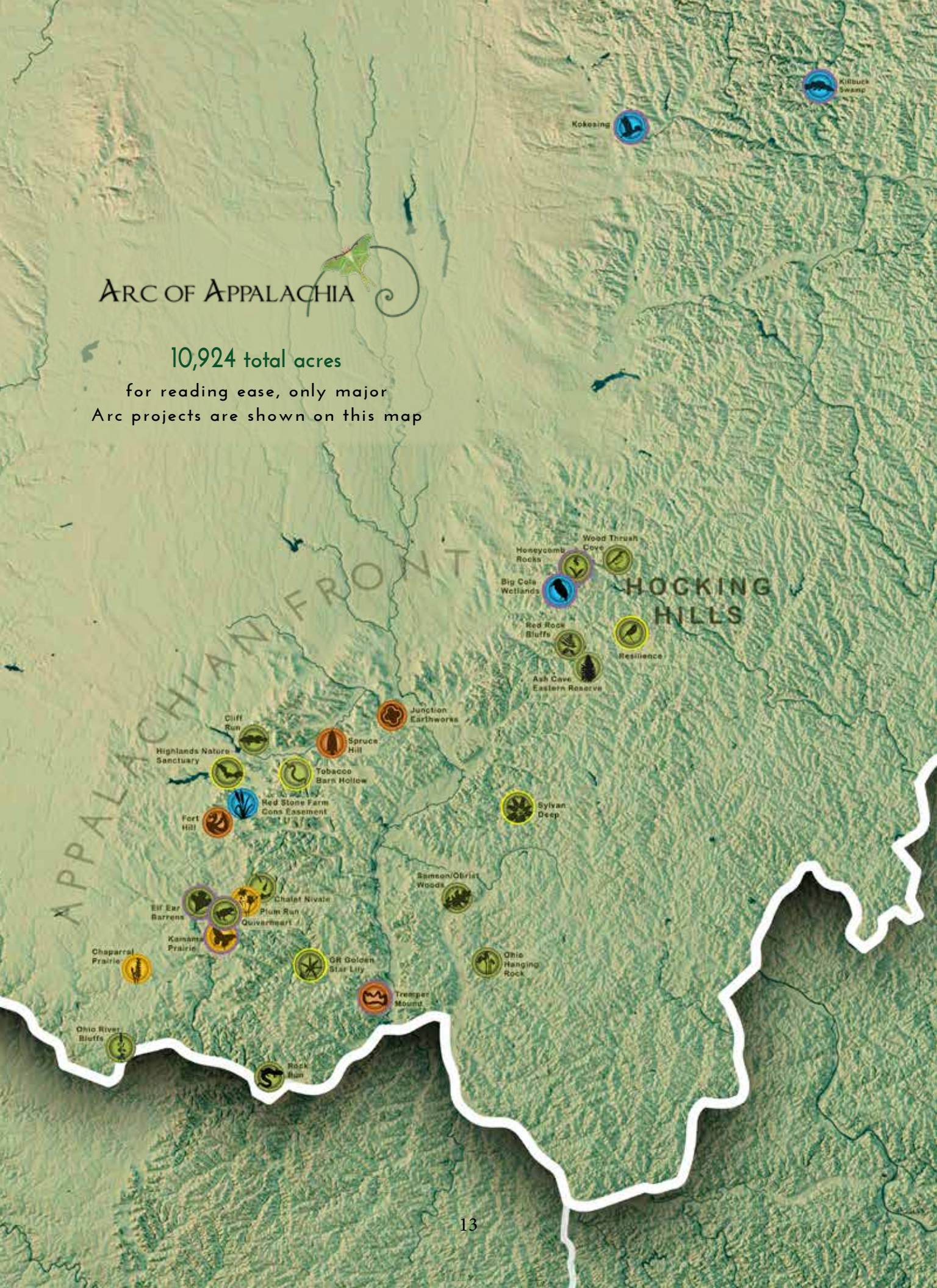
icons on map with
yellow halos
represent our current campaign

icons on map with
purple halos
were projects funded in last year's campaign and brought to completion in 2023

for reading ease, only major Arc projects are shown on the map



Resilience in Hocking Hills	513 acres
Foster's Retreat in Hocking Hills	13 acres
Hickory Hollows at the Sanctuary	77 acres
Pickett Run at the Sanctuary	19 acres
Sycamore Springs at the Sanctuary	5 acres
Walworth Pond at the Sanctuary	11 acres
Sylvan Deep in Jackson County	106 acres
Sugarbush Hill at Tobacco Barn Hollow	39 acres
Racer's Edge at Tobacco Barn Hollow	16 acres
Gladys Riley Golden Star Expansion	43 acres


ARC OF APPALACHIA
10,924 total acres
for reading ease, only major
Arc projects are shown on this map
APPALACHIAN FRONT
HOCKING HILLS
Killbuck Swamp
Kokosing
Honeycomb Rocks
Wood Thrush Cove
Big Cola Wetlands
Red Rock Bluffs
Resilience
Ash Cave Eastern Reserve
Junction Earthworks
Cliff Run
Spruce Hill
Highlands Nature Sanctuary
Tobacco Barn Hollow
Red Stone Farm Cons Easement
Fort Hill
Sylvan Deep
Samson/Obrist Woods
Chalet Nivale
Elf Ear Barrens
Plum Run
Quivermart
Kansans Prairie
Chaparral Prairie
GR Golden Star Lily
Ohio Hanging Rock
Tremper Mound
Ohio River Bluffs
Rock Run

2024 STORIES of the land

RESILIENCE

When someone mentions Hocking County, grasslands and Henslow's sparrows are not the first things that come to mind. But then most people have not yet visited Resilience, the Arc's new preserve in Hocking Hills. There is a story to tell. And although the story ends well, it has a shaky start.

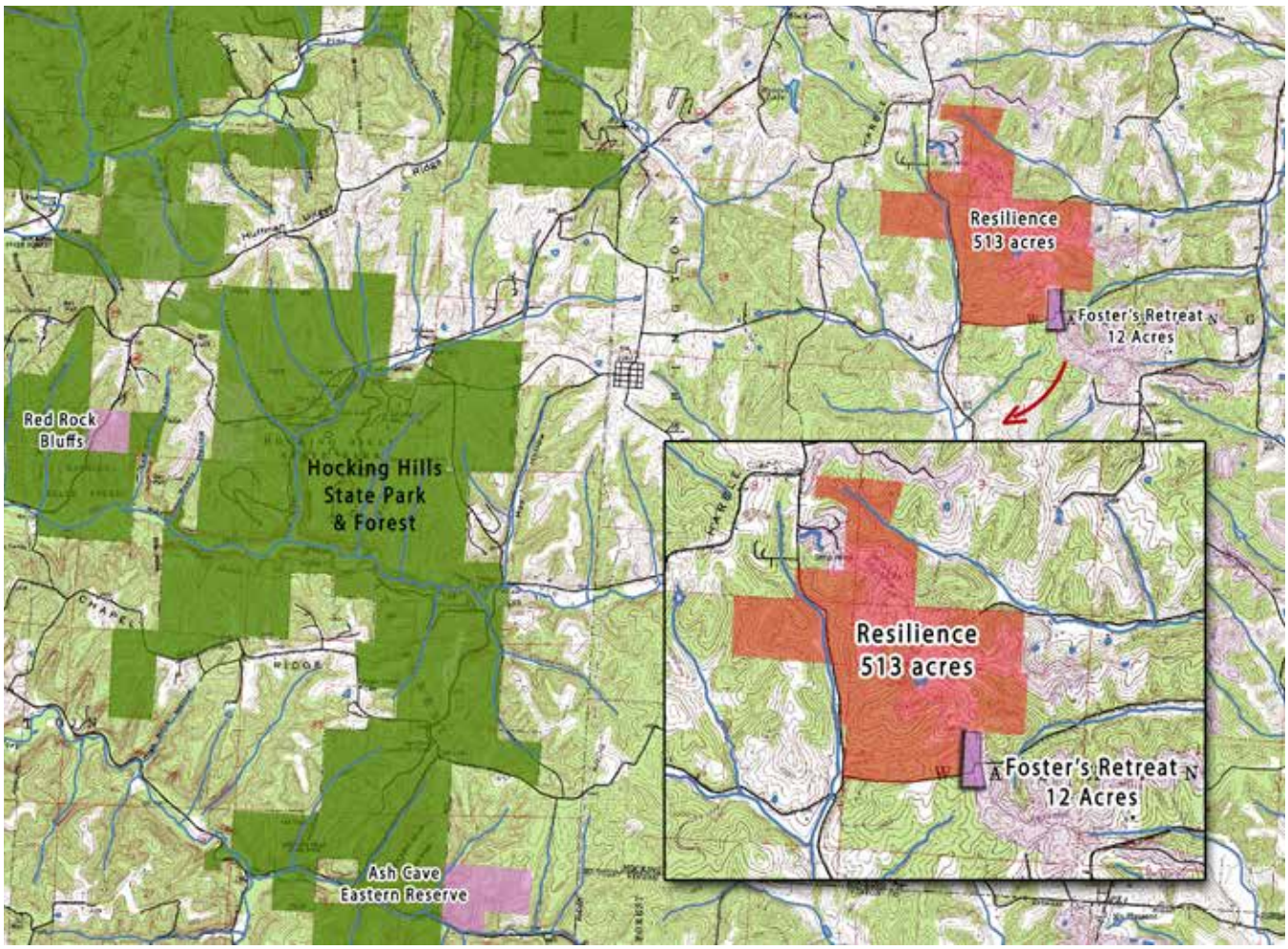
To be truthful, when the property showed up on the real estate listings, the only reason it attracted our attention was its size and location. Just about every human disturbance known to occur in Ohio had taken place on the property sometime in the last 200 years - farming, logging, oil drilling, and strip mining for coal. The latter had managed to level its ridgetop.

From our research, we knew the strip mining that had taken place in the 1980's was the most destructive. The ridgetop was literally turned upside down to access the coal beneath. The bedrock that was once configured in orderly layers above the coal was now a jumbled mix of rock through which rainfall percolated like water through coffee grounds. As the waters moved through the high surface area afforded by the broken rocks, it picked up natural minerals in unnaturally high concentrations, including such things as aluminum, sulfuric acid, manganese, copper, lead, arsenic and mercury. Upon completion of the coal harvest, the land was "reclaimed" in an effort to minimize mining's impact on the watershed. Inevitably, the reclamation practices of that era were only somewhat effective.

No, the property listing didn't sound terribly promising, but we decided it would be interesting to take a look.

When Arc representatives visited the property, we saw the expected precipitates in the streams. It wasn't the worst acid runoff we had ever seen in Ohio, but far from good. As the waterways flowed downstream, they dropped various hues of precipitates on their winding journey – colorful, but deadly to life. First to drop out were the silver

the Arc's wildands preservation campaign



a secluded 513-acre mature forest in hocking hills

gray precipitates of aluminum compounds, and next the signature reds of iron. Resilience's trajectory from strip mine, to hunting and rangelands, to nature preserve, was not going to be a simple straight line, if it were to happen at all.

The rest of our day at Resilience, however, was a complete turnaround. The biggest surprise was the uplifting beauty of the strip-mined highlands. The vast rolling fields felt and looked more like a Colorado alpine meadow than an Appalachian Ohio meadow. Barn swallows wove air-tapestries around us as we strolled, taking advantage of the insects we kicked up. To our utter astonishment, we heard the familiar "tss-sliep" songs all around us, and we realized we were surrounded by the largest breeding population of Henslow's sparrows we had ever witnessed - anywhere

Top left: aerial of Resilience's vast forest by Brian Prose. Inset: Canada lily, a common woodland flower at Resilience. Right: Agile tiny blue-gray gnatcatchers enjoy abundant populations at Resilience. Photo by Jim McCormac.

from 30 to 50 pairs of them!! It was clear that despite the property's past ravages, nature hadn't given up. The land, you might say, was resilient.

The flanks that surrounded the ridgetop and dominated the acreage of the property were entirely wooded with oaks, hickories, and maples. Invasive plant pressure varied from place to place but was relatively low in the deep woods. We admired literally thousands of healthy, towering trees. Occasional flipped rocks (carefully replaced) revealed the presence of a vital salamander population - a good sign. We strolled by showy orchids in bloom, cascading colonies of mayapples, and carpets of Canada lilies. On the interface between forest and field, groves of Virginia scrub pines grew, boasted yellow-breasted chats and pine warblers.

Ironically, the numerous catch basins on the property - built to slow down acid run-off and contain its precipitates - had long ago been bypassed by the streams. This spelled bad news for the streams' water quality. But because the basins had filled up with fresh rainwater, they had become vernal pools teeming with wood frog tadpoles and spotted salamander larvae. Graceful newts hunted silently in their rich tea-colored waters. Wherever these pools and marshes received enough sun, the rare, acid-tolerant netted chain fern grew in large colonies. Here, aquatic plants proliferated, along with thick mats of sphagnum moss.

As a protection endeavor, Resilience's forest was premier, and so was its location. Fortuitously, the property's owners were very interested in conservation. As part of the negotiated purchase contract, they agreed to wait for the next Clean Ohio grant cycle. And because it would likely take a year to close on the property, it required a great deal of trust and patience on their parts. How desperately we wanted the grant to be awarded in order to not disappoint the owners, and to preserve the land!

Because of the project's large size, however, it would be the most ambitious Clean Ohio grant the Arc had ever pursued. The project would require the entire pot of money offered in a district that covers multiple counties and typically attracts highly competitive applications. If we didn't score in the very top position, all would be lost. Accustomed to collaborating with our conservation colleagues, being on the very top and "taking it all" was an uncomfortable goal, but by now we were committed. If it were to be sold on the open market, it was nearly certain that its beautiful million-dollar forest (we knew its value precisely because we had the timber appraised) would be logged. We decided we had to try for "number one."

Understanding the challenge of the task before us, we called on John Howard, one of southern Ohio's most respected naturalists. We knew we certainly wouldn't

Top left: Barn swallow in flight. Photo by Jim McCormac. Top middle: Arc staff member takes in the beauty of Resilience's open ridgetop. Top right: Henslow's sparrow singing at Resilience. Photo by Jim McCormac

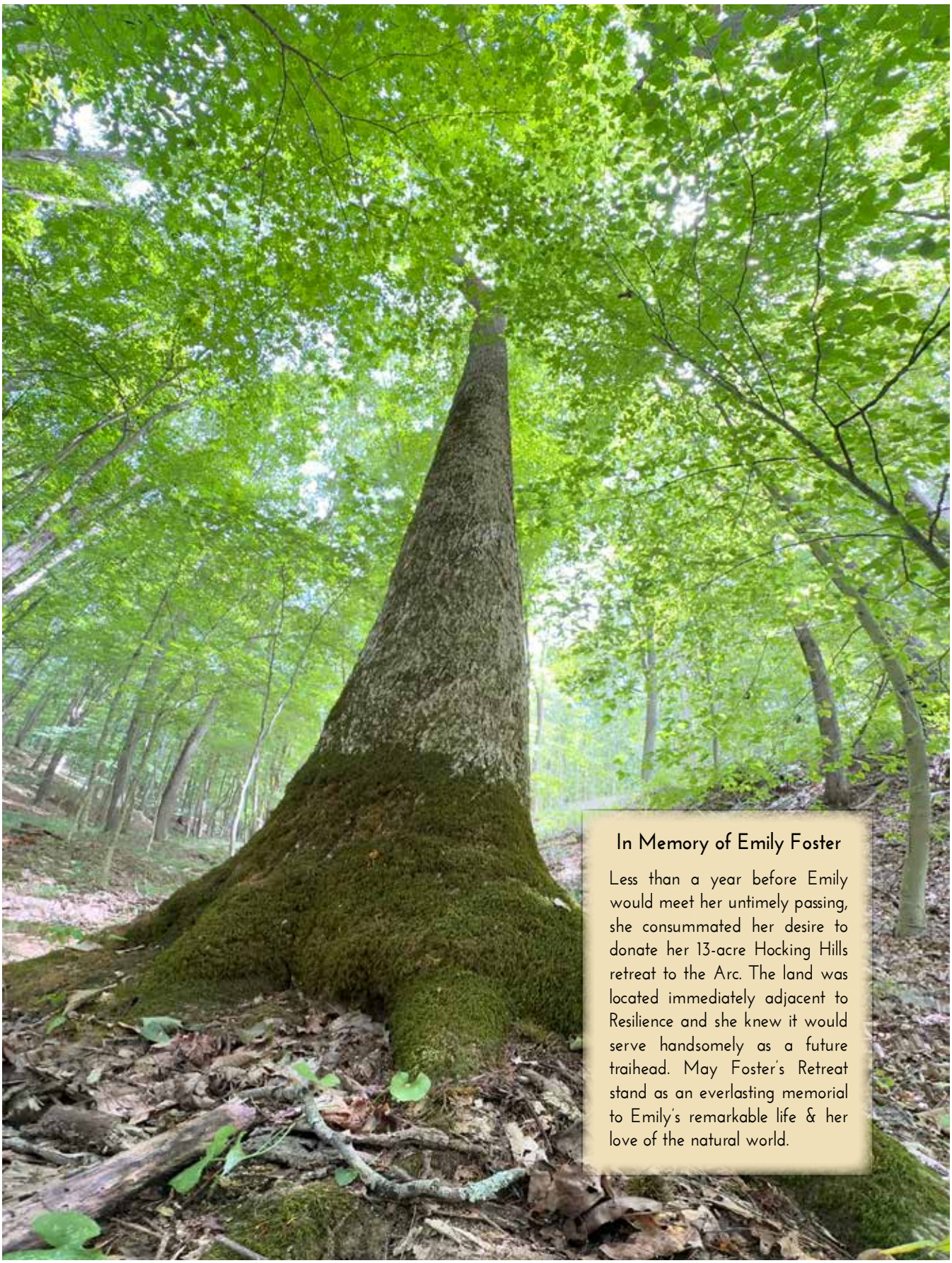
win the grant on the basis of water quality, so our focus would have to be solely on the splendid biodiversity of its forest community. John offered to organize a bio-blitz for the property. A bio-blitz is usually a two-day event with field researchers, representing all kinds of disciplines, setting out to see how many species of dragonflies, flowers, trees, mammals, birds, moss, fungi, ferns, reptiles, and amphibians they could record. Not only would this produce biological data, but we also would score extra points if we were lucky enough to find species that were rare, threatened, or endangered.

On the appointed date about 20 people came to Resilience with various tents and recreation vehicles and set up camp. They swept across the property like locusts - searching, testing, camera trapping, and flipping rocks. For two days and into the night the search went on.

By the end of the first day, we were exceptionally pleased with the health and the diversity of the forest. But because forests are Ohio's most common habitats, finding rare species proved elusive. After a full day of inventorying, we were a tiny bit disappointed we couldn't add another interesting species to our riveting Henslow's sparrow story.

Present for the bio-blitz was Laura Hughes, a field biologist who, among multiple skills, is knowledgeable in firefly identification. Thanks to the recent publication of the first firefly book for Eastern United States, authored by her friend, Lynn Faust, Ohio citizens were starting to recognize firefly species. Exciting new discoveries were popping up all over the state. The biggest news, much of it contributed by Laura, was that the famed synchronous firefly of the Smoky Mountains could be found right here in Ohio. The fireflies have always been here of course; it's just that no one was looking.

No one was looking harder for them than Laura. Laura is indefatigable, and she commonly continues her field pursuits deep into the night. One night, deep in southeastern Ohio at around 1 a.m. (a good two hours after any respectable synchronous firefly would long have flickered out for the night), she found a synchronous firefly population in peak display. Further field research confirmed more late night populations in the region. Maybe, she mused, a lot more undiscovered populations are out there and we've just been sleeping through them!



In Memory of Emily Foster

Less than a year before Emily would meet her untimely passing, she consummated her desire to donate her 13-acre Hocking Hills retreat to the Arc. The land was located immediately adjacent to Resilience and she knew it would serve handsomely as a future traihead. May Foster's Retreat stand as an everlasting memorial to Emily's remarkable life & her love of the natural world.

One of Resilience's many fine elder trees. Photo by Tim Pohlar

Top: American toad standing tall. Photo by Jim McCormac. Middle: Toad tadpoles on the ridgetop of Resilience. Bottom: Netted Chain Fern at Resilience. Photo by Gary Conley.

And so, when most of the others had gone to bed at Resilience, Laura and a few of her colleagues stayed up. Around 1 a.m. they ventured into a nearby glen and saw the holy grail – a well-established synchronous firefly population giving off their distinctive flash train. Later that morning we celebrated the news around breakfast. We had our second charismatic species! By the end of the bio-blitz, we had recorded over 651 species.

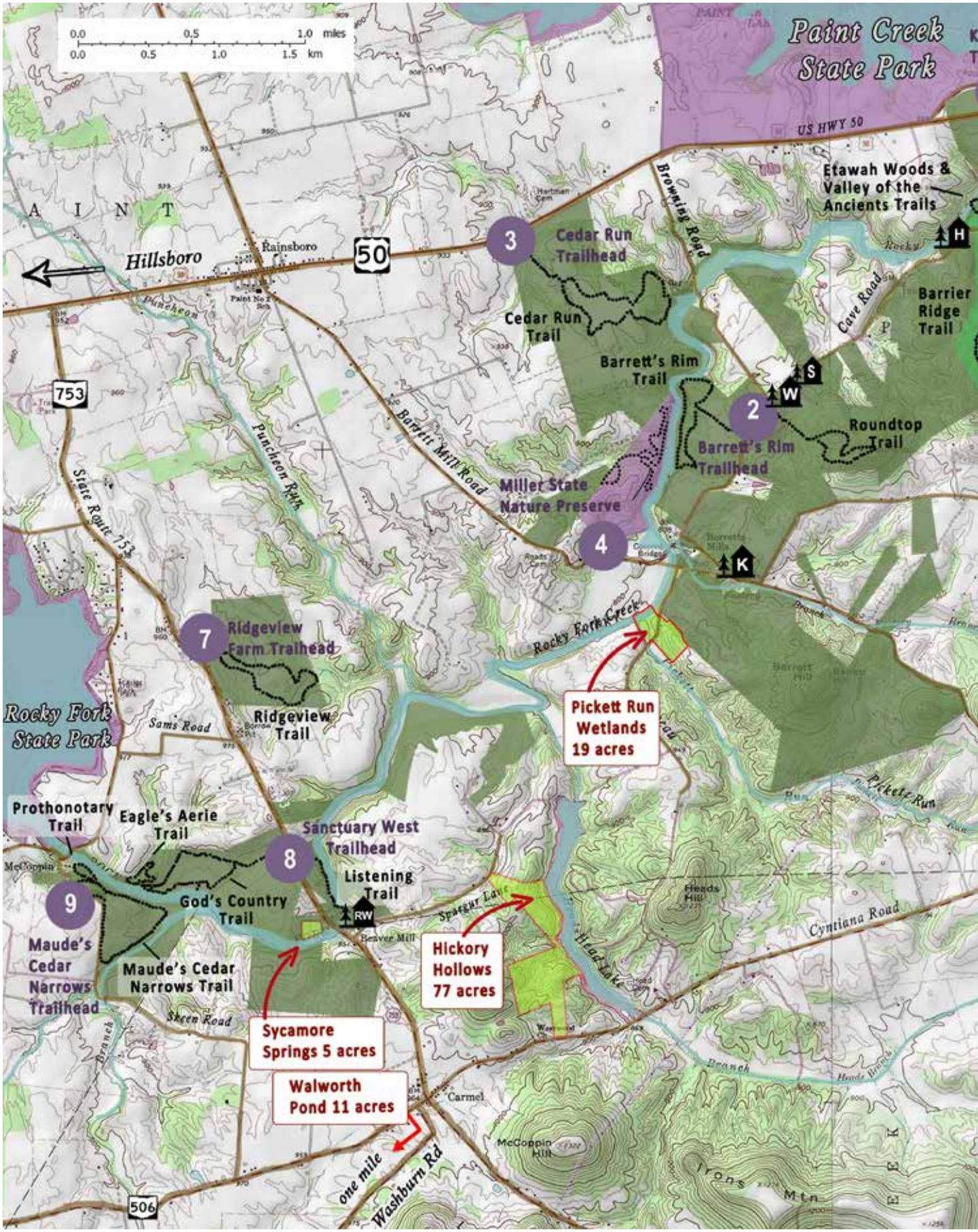
That fall the Clean Ohio grant was written and submitted, followed by presentations to the scoring committee. The most nerve-wracking part of the whole process now began - waiting. Two months later we learned we had secured the top score on the grant application! It was clear that the Clean Ohio scoring committee members were deeply pleased to be able to facilitate saving such a large forest. We were jubilant and felt blessed to have had such a supportive field biologist community at our back, making this grant award possible.

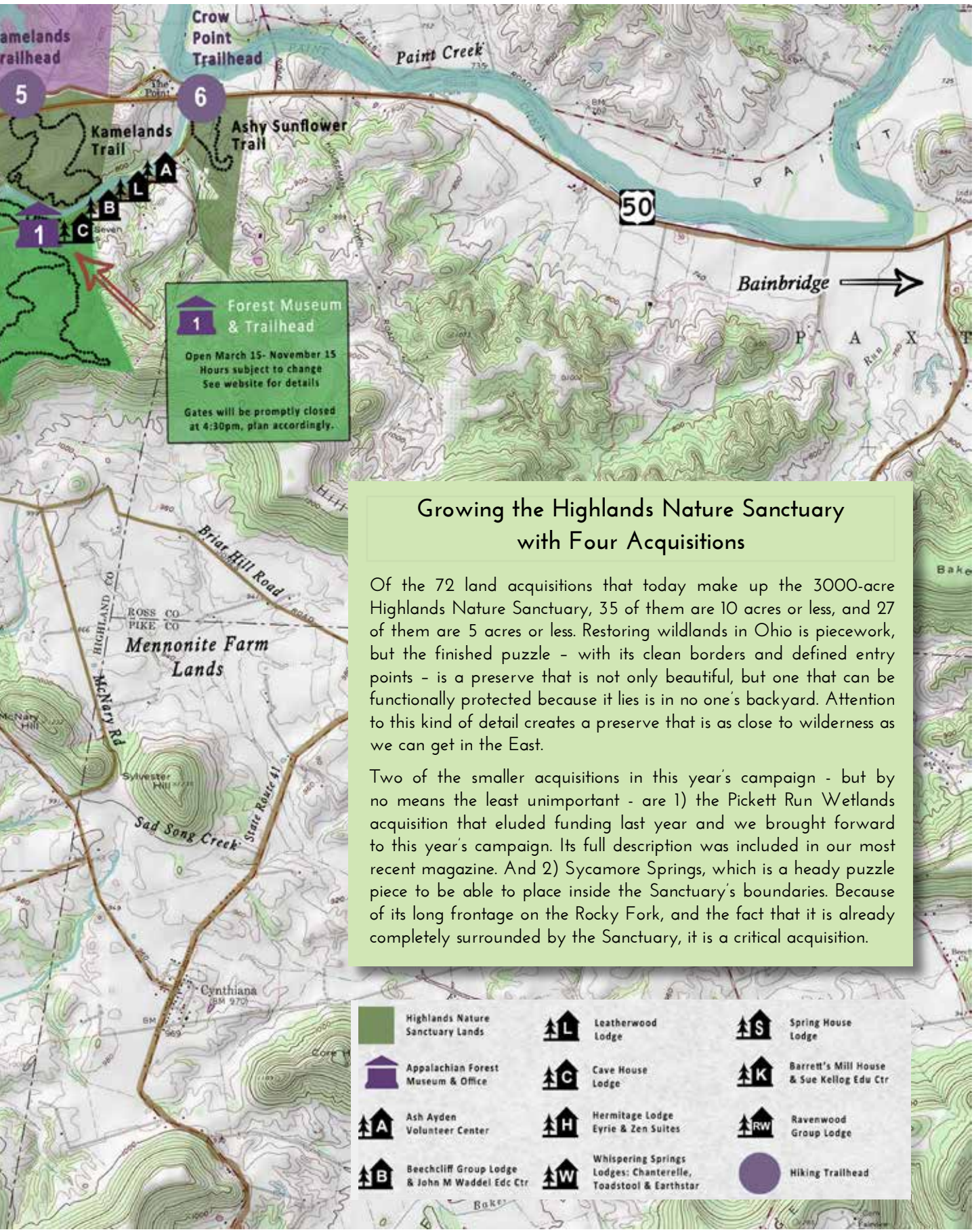
Winning the grant was just the first step, however, in securing the preserve. Recording a deed conveys the legal rights to ownership, but to truly be an owner in rural Ohio one must have boots on the ground. If there is not some visible form of possession, the land is considered vacant and then others feel free to use it as they wish.

A primary challenge at Resilience was restricting access to off-road vehicle enthusiasts. The Arc installed and secured gates, erected signs, and established a human presence with volunteers associated with the Arc's deer management program. The latter addressed two parallel issues on the property: four-wheeler traffic and an extremely high white-tailed deer population that was causing significant browse damage.

Long term, the Arc plans to install a parking lot and hiking trail system at Resilience, funding for which is currently being sought. Once developed, special night time permits will also be offered, not only to allow people to watch fireflies, but to listen to whippoorwills and watch the preserve's many bats zig zag below a blanket of stars. Resilience's meadow is one of the state's finest locations for dark sky stargazing. Here, one can see a panorama of the Milky Way so vast that a single glance can't take it all in.

Every preserve has its own unique story to share. Here at the Arc, we are honored to actively listen, inquisitively watch, and doggedly discover what the land and its natural communities wish to reveal to us. Most of us have been taught we stand alone, but a trip to Resilience reminds us that we are inexorably tied together with all Life. Nature's pain is our pain. Her healing, endurance, and magnificent resurrection are ours as well. Resilience is a living demonstration of the indefatigable nature of life. Resilience is here to plant seeds of hope in the hearts of her admirers.

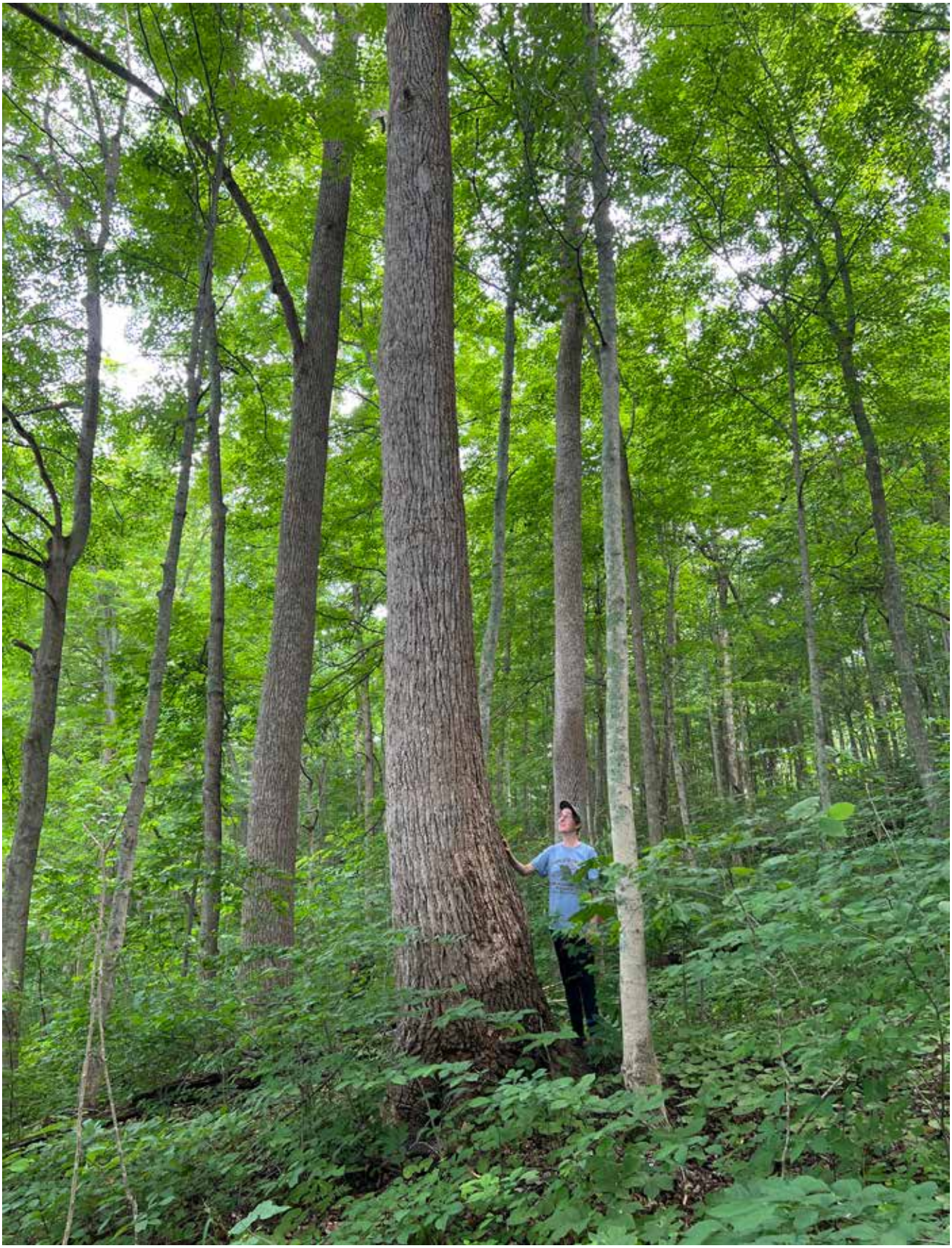

Paint Creek State Park
US HWY 50
Etawah Woods & Valley of the Ancients Trails
Browning Road
Cave Road
Barrier Ridge Trail
3
Cedar Run Trailhead
Cedar Run Trail
Barrett's Rim Trail
2
Barrett's Rim Trailhead
Roundtop Trail
Hillsboro
Rainsboro
50
753
Barrett Mill Road
Miller State Nature Preserve
4
State Route 753
Rocky Fork Creek
7
Ridgeview Farm Trailhead
Ridgeview Trail
Rocky Fork State Park
Sams Road
Pickett Run Wetlands 19 acres
Prothonotary Trail
Eagle's Aerie Trail
Sanctuary West Trailhead
8
Listening Trail
9
God's Country Trail
Maude's Cedar Narrows Trailhead
Maude's Cedar Narrows Trail
Beaver Mill
Sprague Lane
Hickory Hollows 77 acres
Heads Hill
Cyntiana Road
Skeen Road
Sycamore Springs 5 acres
Walworth Pond 11 acres
Carmel
McCoppin Hill
one mile
Washburn Rd
506
Irons Mtn



Growing the Highlands Nature Sanctuary with Four Acquisitions

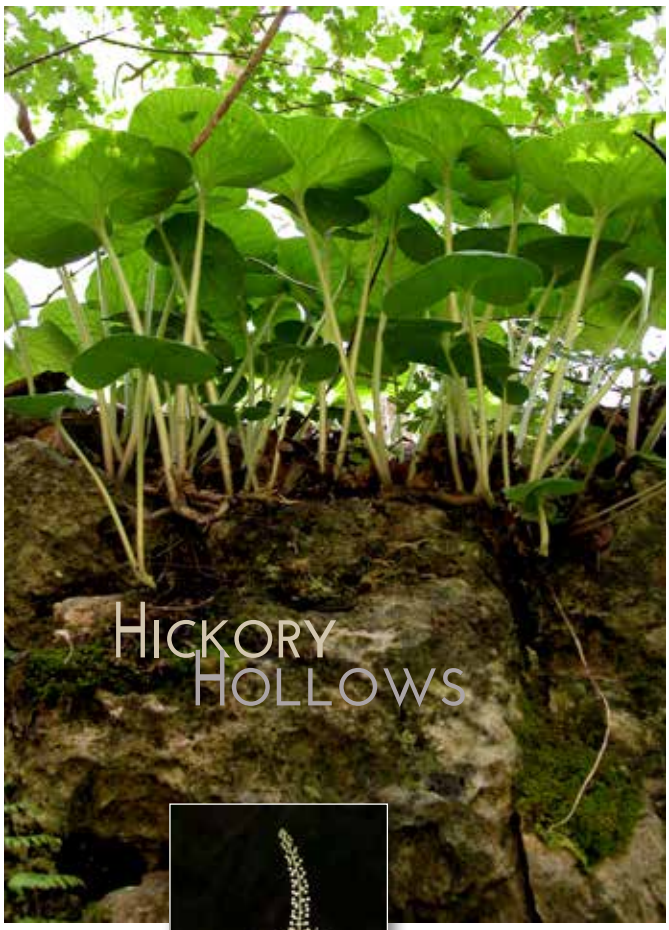
Of the 72 land acquisitions that today make up the 3000-acre Highlands Nature Sanctuary, 35 of them are 10 acres or less, and 27 of them are 5 acres or less. Restoring wildlands in Ohio is piecework, but the finished puzzle – with its clean borders and defined entry points – is a preserve that is not only beautiful, but one that can be functionally protected because it lies is in no one's backyard. Attention to this kind of detail creates a preserve that is as close to wilderness as we can get in the East.

Two of the smaller acquisitions in this year's campaign - but by no means the least unimportant - are 1) the Pickett Run Wetlands acquisition that eluded funding last year and we brought forward to this year's campaign. Its full description was included in our most recent magazine. And 2) Sycamore Springs, which is a heady puzzle piece to be able to place inside the Sanctuary's boundaries. Because of its long frontage on the Rocky Fork, and the fact that it is already completely surrounded by the Sanctuary, it is a critical acquisition.



Andrea Jaeger standing next to a grand tulip poplar, one of Hickory Hollows' many towering trees.

Top left: Wild ginger clinging to karst outcrops. Photo by Tim Pohlar. Top right: Classic karst country bouquets of Fase Rue Anomone. Paragraph insert: The floral wand of black cohosh, plants that are especially abundant in Hickory Hollows. Photo by Jim McCormac.



HICKORY HOLLOWS

the preserve that teaches lessons of capacity

Here at the Sanctuary, the Arc of Appalachia's headquarters, we try to keep close tabs on properties that come up for sale in the region. And so, when two small for sale signs popped up on Cynthiana Road, our curiosity was piqued. The 77-acre property listed was made up of seven small parcels that lay in a contiguous tract on the lower slopes of Spargur Hill, bordering a private lake. Satellite images revealed forested hills, but in insufficient detail to assess the woodland's quality.

On a pleasant Saturday in July, Arc staff members Andrea Jaeger, Brit Wood, Nancy Stranahan, and Brent Charette, decided to hike into the property to see if it might prove "Arc-worthy."

The property stretched between two roads in a region unfamiliar to us. Spargur Lane bordered its northern boundary; Cynthiana Road its south. Entering from Spargur Lane, we were greeted by an abandoned house trailer, a run-down empty shed, rubbish, and invasive plants. The soils and stream channels behind the trailer showed signs of gullying and past erosion events. Although this first seven-acre plot had a solid canopy of maturing trees, the understory was nothing but thickets of multiflora rose. This is how so many of our site assessments go. We all glanced at each other and bit our lips, shaking our heads.

Bracing ourselves, we crossed over a low ridge to the next parcel. Thankfully, as if a line were drawn across the ground, the multiflora rose was left behind. We angled to the east to catch our first glimpse of Head Lake, the panorama of hardwood forest reflected against its silent still waters, and the forested hills and valleys on its far shore. Our moods lifted immediately.

We began to notice hickory trees, not just a token one here and there, but as the dominant trees around us. Here were large and healthy pignuts, shagbarks, and bitternuts.

Hickory Hollows overlooks a privately owned large, secluded lake. Photo by Tim Pohlar

For years we've longed to save a remnant of the hickory-rich forests that once thrived in the western half of the Sanctuary. But few of them have survived, and none have come up for sale. Might this place be the first?

From parcel to parcel the positive side of the balance sheet continued to grow. Hillsides were carpeted by spring ephemerals such as wild ginger and twinleaf. Fingers of dolomite braced the hillsides, offering shelter for ferns, moss, and more wildflowers. Tributary streams dissected the hills as they meandered down from Spargur Hill, contributing their own water-borne life force to that of the lake's. These streams were punctuated by small waterfalls, limestone cliffs and slump blocks - gifts provided by incomprehensible eras of geologic time. We walked below towering tree to towering tree, shouting excitedly to each other, "Look at this one!" "Look at that one!" Our faces were now covered with delighted grins.

The final exclamation point for us was an exceptionally large patch of black cohosh in full bloom. It was then we decided to commit to a name. *Hickory Hollows* it shall be. We all agreed without discussion that the Sanctuary and this forest needed each other. Exiting the forest and while still in the car with the others, Nancy called the realtor to tell him we were interested, and we would get back to him as soon as we had some time to strategize.

After that day, the rest of the summer became a blur. The seller was excited about our interest, but required a closing date within 60 days, well before any grant funding could be leveraged. Furthermore, our Land Revolving Fund, never big enough in any case for a project of this scale, had been emptied earlier this year. We toyed with borrowing the money and having our sister nonprofit hold the land for us until we could get Clean Ohio funding, only to find we were unable to secure the formal support the grant required from our county commissioners and the region's local trustees. Clean Ohio was out.

That left only one option, something we've only done three times in our 28-year history, and that was to go to donors with an emergency campaign. The acquisition would then either succeed or fail on the basis of public response. But that was easier said than done. All of our staff were in the thick of our busy summer visitor season, as well as writing five Clean Ohio grants due that fall. We had to seriously ask ourselves, "Do we have the muscle for this?"

Above left: Dolomite cliffs at Hickory Hollows tower above the lake, photo by Tim Pohlar. Above right: Hooded warbler, signature of large unbroken forests by Jim McCormac.

And then the unthinkable happened. Sylvan Deep in Jackson County showed up on the realtor's listing. Ten days later we were in contract for a second *property* we didn't have the money to buy (see the Sylvan Deep article on page 31 for more information). The emergency campaign was suddenly becoming very interesting.

Work on the infrastructure for a campaign commenced. We built webpages and excel spreadsheets, wrote up mass emails, made a short film, prepared to deluge our social media platforms, and got our systems ready for what we hoped would be an onslaught of donations. We couldn't believe we were going to ask for nearly a million dollars, considering the most money we had ever tried to raise in emergency circumstances in the past was $300,000. Were we crazy to even try? We were about to find out.

Three weeks to the day before the first of the two closing deadlines – the one for Hickory Hollows - the emergency campaign went live. Our staff found the results to be more surprising than even did our donors. On day 3, we already had received enough donations to pay for Sylvan Deep!!

Two days before Hickory Hollow's closing date in Lancaster - we disabled our campaign's donation button. To our absolute astonishment, in less than three weeks we had raised a million dollars from roughly 661 donors, 273 of whom were new to the Arc. Our emergency campaign was complete. We were stunned and very, very happy. We suspect that wildlands preservation is perhaps the best tonic that exists for battling cynicism. The people of Ohio love their wildlands, and they are true spirit-lifters!!!

We will never rest in our pursuit to leverage our donors' gifts as far as they will stretch. In the leisure of the months ahead, if we find grants that might yet be directed to Sylvan Deep or Hickory Hollows, we won't hesitate to put the effort into securing them. If we succeed, we may be able to amplify the land-buying power of our donors' generous contributions to fund even more land.

But, at the very least, the gifts that have so generously poured in this summer from private donors have ensured that Sylvan Deep & Hickory Hollows are fully funded and will be preserved into perpetuity.

And that, friends, is a deeply gratifying and sufficient outcome.

CABIN AT WALWORTH POND

honoring the legacy of highland county's Carmelites

By Brent Charette, Director of Arc Stewardship

Last year the Arc received a very intriguing email from Jim Walworth, a person with whom we weren't yet familiar:

"Dear Ms. Stranahan, my wife Kathleen and I own 10.65 acres just outside of Carmel. It was purchased 22 years ago as a writer's retreat for my wife, and we have both treasured the unique flora and fauna around our getaway cabin. It's listed for sale but we have not yet found a suitable buyer. We are particular, and we are most concerned that the buyer has the like-mindedness to continue to treasure and preserve the place. We are moving to Florida in a few months, and as an alternative to selling it, we wanted to see if the Arc of Appalachia would be interested in accepting the property as a donation. I am going to be there tomorrow for my weekly trek from Dayton to do upkeep work. Would you be available to meet?"

A few of our staff gathered together to meet Jim and take a look. The property was located just a couple miles south of Ravenwood Lodge and the nearby crossroads settlement of Carmel, in the remote heavily forested region that lies between the Highlands Nature Sanctuary and Fort Hill. The long narrow entrance lane to the property was heavily hemmed in on both sides with trees, and when we turned the final corner and the cabin came into view, we were smitten.

What did it remind us of, exactly, besides a romantic writer's retreat? Maybe a north woods Adirondacks cabin? Or a southern Appalachian hunting cabin? Whatever it was, it was a woodsy cabin out of a novel that would make any naturalist swoon. The cabin was surrounded by a spacious deck overlooking a dark pond. Its waters tinted by generations of fallen leaves, a few newts hung suspended just below the surface. In the rear of the cabin was an outdoor kitchen that would captivate any western "cookie" (we confess our heads were still in romance novels), and above it all rose a splendid Appalachian woods. We immediately loved the place, and it didn't take long for us to tell Jim and Kathy that we would be honored to be the recipient of such a generous gift.

Jim was completely forthright that they hadn't been visiting the cabin as frequently as they did when their children were young. Although clearly they had invested considerable funds into keeping the place up, still, it had been uninhabited for some time and would need some work. He also warned us that the Health Department had only begrudgingly grandfathered in the septic system. "Okay,

Above: The Cabin at Walworth Pond at sunset. Middle right: The pond behind the cabin. Lower Right: the outdoor kitchen on the deck of the cabin. Photos by Jim Walworth.

well," we said. "No worries. We have a good relationship with the Health Department and we'll work things out."

Within six months of receiving the donation, Brit Wood, Arc's facility manager, was tearing out his hair. He soon discovered that when he turned on the shower, water started spraying all over creation. Obviously the plumbing was going to need a wee bit of attention. And then, we were slapped with a violation notice from the Health Department for a faulty septic system and we were forced to turn off the water until we had brought the system up to code. Many months later, when Brit was finally permitted to connect the well back up to the house and its brand new septic system, nothing came out of the well but mud. Jim and Kathy were aghast at our stories of woe, and they generously offered, in addition to their earlier donation of land and equipment, an additional donation of $20,000 to help with the needed repairs.

Not even these challenges were able to dampen our enthusiasm for the property. The forest alone, we believed, was worth preserving, and the old cabin, despite its demands, was truly a historic building.

Twenty years ago Kathleen had picked up a book by John Kessler, *North from the Mountains*, written by an author who was born and raised in Carmel. He had written about his research into the origin of peoples living in the immediate region who were variously known as

Spargur-Beaver Mill

Eastern Highland County remained wilder longer than most of Ohio. In 1938, Journalist Clark B. Firestone from the *Cincinnati Times Star* journeyed out to the Fort Hill region and published this colorful report:

> In this area, bordering Serpent Mound, is a district of township size, where some strange upthrust and subsidence has made a record of geological changes which is a pocket edition of the entire story of the Appalachians. In this area, also, is a genuine prairie, and flowers to match; a region in which southern and northern plants grow together; one of the last surviving stands of virgin forest; the ancient watering place of Mineral Springs; the aboriginal monument of Serpent Mound and Fort Hill; a southern hillbilly population, hillbilly place names, and squirrel hunters who can hit things with muzzle-loading rifles. Also there are old mills and covered bridges. We stopped at a place where there was both, Beaver Mills on the Rocky Fork of the Paint Creek. Its tributary stream, flowing through a deep gorge out of which sycamores tower, drops ten feet over a dam above the bridge and turns a tub wheel in the mill.

Update: The uplift is what we now call the Serpent Mound Crypto Explosion. The globally rare alkaline prairies are now protected by several Arc preserves. Virgin timber remains at Fort Hill. Mineral Springs was once a famous health resort for the urban wealthy. The southern hillbilly population included the Melungeons. The Sanctuary now owns most of the Beaver Mill property, including the home of Barney Beaver, which is now Ravenwood Lodge. The mill is long gone, but one can still rock on Ravenwood's porch, listening to the sound of water spilling over the Beaver Mill dam.

Carmelites or Melungeons. They were a mixed race of people around which many mysteries swirled. Excitedly, Kathleen pointed out a photo in the book to her husband, Jim, of a Melungeon family living near Carmel. "Look, Jim, doesn't this look like our cabin?" Intrigued, she invited the author to the cabin to chat.

John was happy to meet her, and elaborated on what he had written about in his book. In the latter half of the 1800s, a reclusive community migrated into what was still a remote, wild area of Highland County, the land lying between what is now the Highlands Nature Sanctuary and Fort Hill. The people were financially poor but self-reliant; not formally well-educated but practiced in woodcraft and in the ways of the wilderness.

Their immediate roots were mostly from Magoffin County, Kentucky, but even there they were immigrants. Their earlier ancestral roots could be traced further south to the mountains and the Piedmont of Virginia, North Carolina, and South Carolina. Some people rumored they were descendants of the lost Cherokee Nation who hid in the hills when their tribe was forced west on the Trail of Tears. A local historian, Violet Morgan, in her book *Folklore of Highland County*, tells of people claiming to be remnants of the Shawnee Nation who lingered behind rather than be forced to reservations in Oklahoma. Some of the place names of their settlements in the Carmel region were derogatory slurs, such as *Pocahontas Row*. Others were colorful, as in, *Coon's Crossing*. In census surveys, Melungeons were variously referred to as mestizos, mulattoes, black, or white. Truth be told, most of the surveyors weren't sure.

Living in eastern Highland County gave the Carmelites the security of having the southern hills at their back, and access to farms to their west, where they could supplement their income as laborers. They eked out a simple living on their own hardscrabble farms in openings of what were otherwise dense woodlands. They earned a reputation of keeping to themselves, which was not surprising considering they were often belittled for looking and living a bit differently from their neighbors. It was well known that if you treated them with respect and kindness, they were friendly and warm to neighbors and strangers alike.

Their lifestyle was poor, rural, and agrarian; and their food was supplemented by hunting and foraging. The porches of their cabins were often covered by strings of leather britches, dried apples, and various herbs for cooking and medicinal use. Violet Morgan states in her book that "they are fond of their pets and when a cabin door is opened, often chickens, dogs, cats, a pig, and young'uns tumble out good-naturedly together." It is known that, even as late as 1938, running water, electricity, and indoor plumbing were not a sure thing in their community.

Melungeon family. Photo courtesy of Highland County Historical Society

Violet had made friends among some of the Melungeons in her day, and her books are credited with bringing wider attention to the families and their ways, especially when she wrote of their practices of adorning the graves of their dead with crushed colored glass. Some locals claim that the Melungeons' subsequent disappearance from the Carmel area was because of the unwanted curiosity they received from Violet's publication. It is difficult to ascertain how much of the local accounts are fact and how much are folklore and hearsay. The descendants of the Melungeons, regardless, continued to survive in eastern United States, even if less noticeably near Carmel.

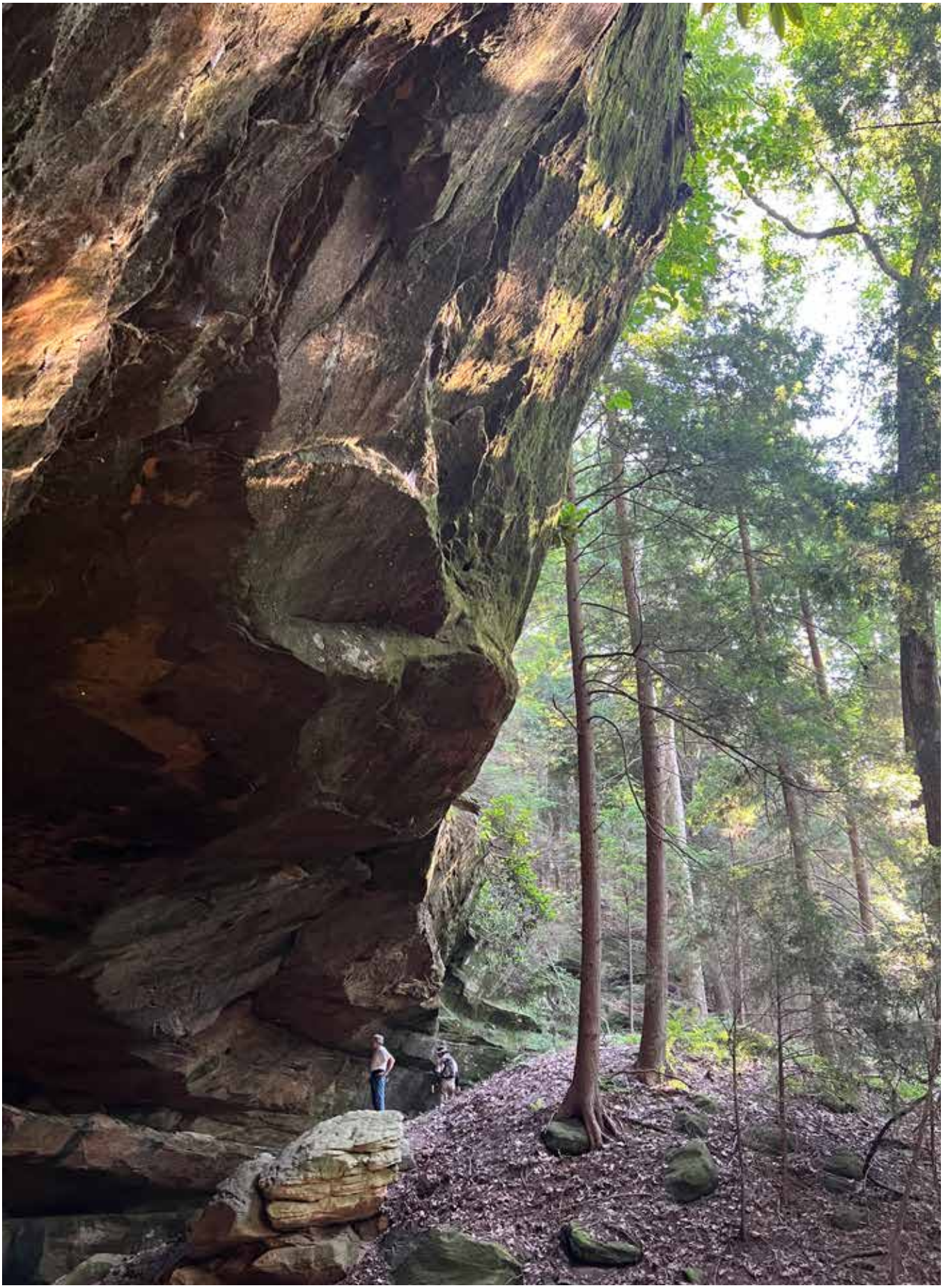
Melungeon family in the Carmel region. Photo first published in a 1950 Melungeon report by Edward T. Price, Department of Geology and Geography, University of Cincinnati. Photo credited to The Ohio State University and The Ohio Academy of Science

Ethnological researchers have used DNA testing to confirm that Melungeons are indeed a mixed race of people of many ethnicities including Native American, Western European, Portuguese, and African. Researchers commented on facial features in some members that implied Native American roots, such as high cheekbones and jet black straight hair, while other members from the same community had short, tightly curled hair. What is certain is that the Melungeans truly exemplify America as a melting pot of people and traditions.

Our nonprofit is committed to honoring and remembering the cultural history of the Carmel region in which two of the preserves we manage are embraced: the Highlands Nature Sanctuary and Fort Hill. We will probably never know if the cabin at Walworth Pond was originally built or occupied by Melungeons. What is certain is that the cabin gives us a visual reminder of what nearby Melungeon settlements may have looked like. We hope that the "Cabin at Walworth Pond" will long serve as an important touchstone for our region's cultural legacies.

Help us renovate the Cabin at Walworth Pond!

The finished value of the Cabin at Walworth Pond is estimated at $202,000, $150,000 of which has been generously supplied through the philanthropy of Jim and Kathy Walworth. If you love bringing history to life, please direct your donation to the completion of the *Cabin at Walworth Pond*. Just like our other historic renovations at Cave House, Barrett's Millhouse, and Beechcliff, the Cabin at Walworth Pond will one day be made available to the public as an overnight rental.



SYLVAN DEEP

preserving a hidden valley in jackson county

By Brent Charette, Director of Land Stewardship

Establishing a preserve in Jackson County has been on the Arc of Appalachia's radar for a long, long time. Through the years we have occasionally assessed several compelling properties in the county, but there was always a hitch - something blocking its permanent protection that was insurmountable. The saga that follows tells of the founding of our first successful preserve in Jackson County. It is a story characterized by connections with friends, both new and old, and the rediscovery of the deep appreciation of the natural world that binds us all.

The tale begins with the M. Dale Patterson family. In 1965, Forest Victor Patterson, retired from his teaching career in Westerville, and resettled with his wife, Grace, down in Vero Beach, Florida. That should have signaled the end of a very short story but Victor wanted to buy some acreage back in Ohio. "just in case things don't work out in Florida.". And so it was in 1968, Victor and his son, Dale, discovered an incredible 100 acres for sale near Ray, Ohio and negotiated its purchase.

Both Dale and Victor were gifted with hearts that were naturally inclined toward conservation and stewardship. They recalled seeing remnant stumps 3 to 4 feet across when they first walked the hemlock-shrouded hollows and forested ridges on their property, reminders of the last time the big trees were felled and dragged out by horses. Offers to log, mine, and drill the family's refuge in the hills came and went over the decades, but the Pattersons' determination to protect their land remained strong. When Victor passed, Dale inherited the farm. When Dale was well into his own retirement years, he decided it was time to pass the torch to a new owner.

The Arc entered the story when a conservation colleague alerted us that an intriguing property had appeared on the market. In typical Arc of Appalachia fashion, the news came at a very inconvenient time. It was just one week after we had become smitten and bound by contract to the purchase of Hickory Hollows. Bound, that is, if we could somehow come up with its sale price in the 60 days permitted by the

Top: Sylvan Deep's moss-covered rock formations. Photo by Realtree. Above: Black-throated green warbler. Photo by Mary Parker Sonis

seller. Simultaneously, we were chugging away on writing no less than five Clean Ohio grants all of which shared the same deadline just a few weeks away. Lastly, because our "Land Bucket" of cash that was reserved for emergency land-buying was bare-bone empty, we had no choice but to devote time to constructing a fund-raising campaign for Hickory Hollows, a specter that was confessedly daunting.

There was simply no time or money to take on another project. We debated whether to even look at the listing, for fear we might fall in love with the property. For then what would we do? Although the photos on the listing looked gorgeous, we decided it best to look the other way.

But as the next few days passed, the property kept haunting us. By the weekend, we caved in and decided that maybe it wouldn't hurt all that much if we just stopped by.

That Saturday, Arc Board President, Rick Perkins, and Arc Director of Land Stewardship, Brent Charette, visited the property. Three hours later, Rick had a sufficient cell phone signal to text Nancy, back at the office, with just two words, "Buy it!" Having a long history of trust-building experiences with these two individuals, she shrugged off her understandable financial concerns and called the realtor before someone else snapped up the property. Within 48 hours, the Arc was in contract to buy a second preserve, without enough money to buy either one of them. This led to some sleepless nights, for sure.

The dramatic story of our successful fundraising campaign for Sylvan Deep is told in detail in the Hickory Hills article on page 22, so we won't repeat ourselves here. Suffice it to say, the purchase contract for Sylvan Deep has been duly, and miraculously, fulfilled.

Because Sylvan Deep was the first wildlands project the Arc had ever attempted to initiate in Jackson County, Rick and Brent scheduled multiple meetings with the Jackson County Commissioners and the Jackson Township trustees. Rick and Brent wanted to become familiar with the county's leadership and assess their interest in land preservation and tourism development. By the second meeting with the commissioners, they were stunned by the depth of the welcome they were given, and the county and township's enthusiasm for protecting their county's natural heritage.

The second township meeting was held as a special open session called by the trustees for the sole reason of finding out what the residents thought of the Arc's proposed nature preserve. Twenty local residents showed up, including adjacent land owners, and many penetrating questions were

Left: Rosyside dace. Photo by Jim McCormac. Right: A male box turtle in front of pink ladyslippers, Photo by Jim McCormac.

asked. One of the attendees was a past Arc board president we had lost contact with. Meeting her again was a wonderful reunion! At the meeting's end, there was a heart-warming show of support from the residents and trustees alike.

Sylvan Deep had already sparked a humbling and satisfying chain of events characterized by the renewal of old friendships and the beginning of new friendships. We suspect this is just the beginning of Sylvan Deep's capacity to bring people together. Receiving such a sincere welcome, we are thrilled to make our debut in this county and we are doubly fortified in our resolve to be of service to its residents.

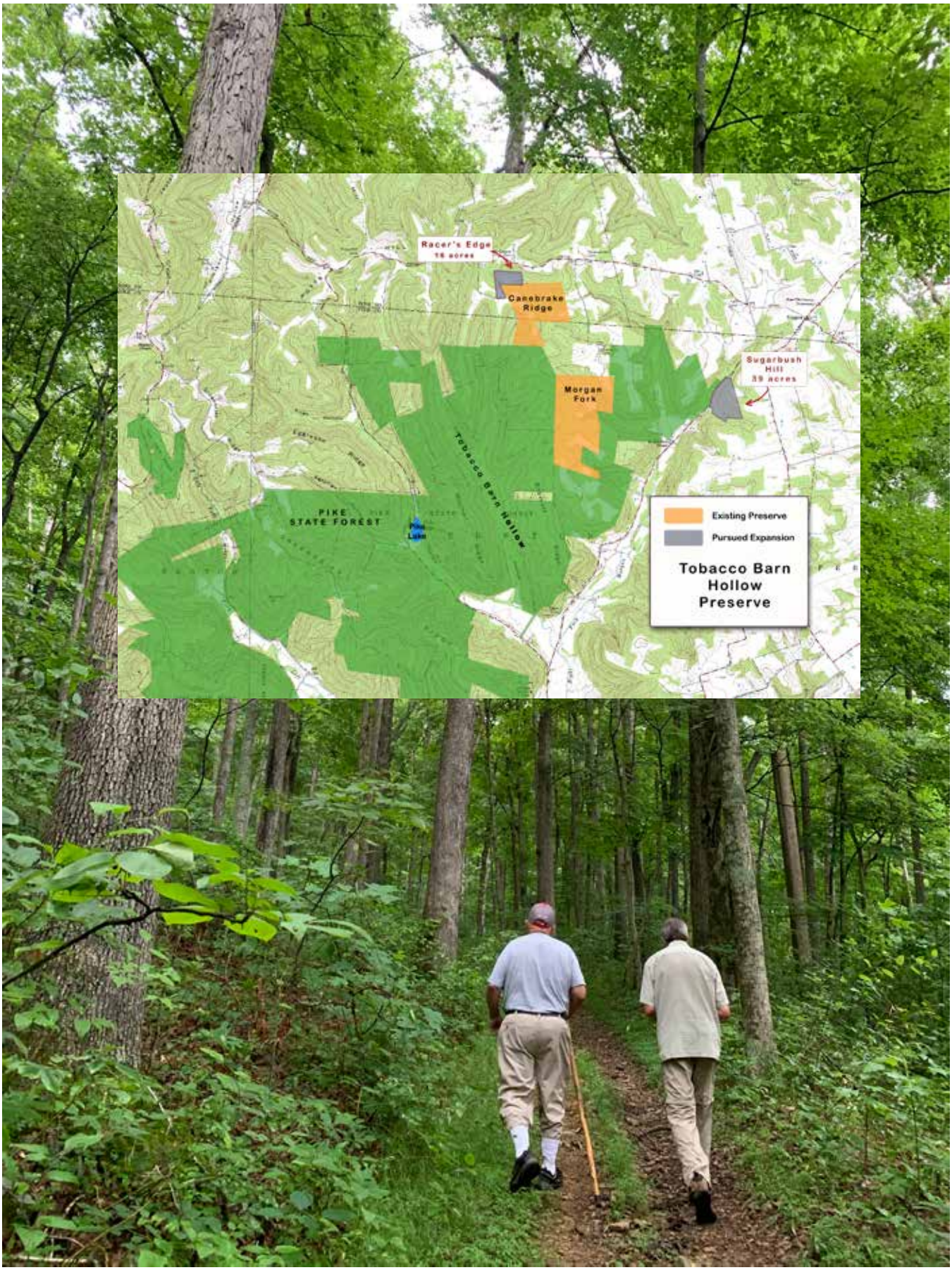
But let's move our attention to the land. Oh my, the land! Sylvan Deep's landscape is absolutely breathtaking! Sandstone cliffs span hundreds of feet across slopes that are presided over by ancient eastern hemlocks. Deep dark ravines are blanketed with myriad ferns, right up to one's waist, and stunning rock features appear around every bend. Cliff faces are sometimes polished and exposed, or alternately blanketed in mosses, lichens, and liverworts. The largest rock shelter is of a scale and magnificence that rivals, if not surpasses, any landscape we've encountered in Hocking Hills. Hanging over its center rim is a small but well-established colony of great rhododendrons, a state-endangered species at the northern boundary of its range.

A sparkling stream dissects the property known as Spencer Run. The stream is uncommonly rich with riffles, flashing with fish, that alternate with quieter pools. The waterway's populations of rosyside dace, southern redbelly dace, and fantail darters are all signature species for clean, well-shaded streams boasting fast-moving well-oxygenated water. Partially submerged slabs of sandstone conceal salamanders and crayfish, its surface rippling with fast-skating water striders.

The riparian forest's rich, moist soil supports the curled bronze bark of river birches, the mottled cream and olive-sided bark of sycamores, gnarled and bent boxelders, berry-laden spicebush shrubs, and pawpaws. Two species of walnuts can be found here – black walnut and the rare white walnut, also known as butternut. A wide variety of classic hardwoods share the upper elevations and ridgetops, including red oak, white oak, chestnut oak, sugar maple, hickory, tulip tree, American beech, and wild black cherry.

The preserve is less than a mile, as the crow flies, from Leo Petroglyphs, a prehistoric cultural site owned by Ohio History Connection. It protects a flat shelf of sandstone that was carved at least 1,000 years ago by indigenous people who traveled the hills and hollows of today's Sour Run, Spencer Run, and Salt Lick Creek. Both the memorial and Sylvan Deep share the same Sharon Conglomerate bedrock, some of its sandstone layers bearing large pearl-white quartz pebbles. The exposed cliff faces at Leo and Sylvan Deep are tangible reminders of the high velocity rivers that once crossed this region, surging off the western flanks of the Appalachian Mountains. Here in this corner of Jackson County they dropped vast amounts of sand as they slowed down before terminating in a great sea to our west.

Sylvan Deep is definitely among the "best of the best" landscapes remaining in our state. The Ohio Division of Natural Areas and Preserves has already deemed the property worthy of receiving extra protection as an Arc -owned designated state nature preserve. We look forward to the years ahead, when funding proves available, to be able to develop a hiking trail that will enable us to share this gem of a preserve in Jackson Township, Jackson County with the greater world.



Brent Charette, Arc Director of Land Stewardship, walks with Gale Rickey at his family-owned sugarbush

We were excited to find this red-bellied snake gathering warmth on a sunny day at Canebrake Ridge. They are one of the tiniest snakes in Ohio, with a handsome brick red belly. Photo by Brit Wood. Insert photo: baby box turtle by Jonathon Root.

TOBACCO BARN HOLLOW

Sugarbush Hill & Racer's Edge acquistions &a preserve journal of a wilderness of wildlife

By Andrea Jaeger, Director of Land Acquisition & Visitor Services.

Tobacco Barn Hollow Preserve has been part of the Arc of Appalachia since 2007, but because it is not yet open to the public and not easy to see from the road, most of our readers are unfamiliar with it. With this article, we hope to bring this beautiful wilderness preserve to your attention.

Tobacco Barn Hollow Preserve is located deep in the heart of the Appalachian hill country that spans the shared border between Ross and Pike Counties. The larger rectangular region in which the preserve is embedded can be described as US-50 on the north (between Bainbridge and Chillicothe); OH-124 on the south (between Latham and Idaho); Chaparral Road on the west; and OH-772 on the east. The land inside these boundaries is entirely dominated by steep hills and heavily-canopied forests. Here one can find Pike Lake State Park, Pike State Forest and places with such colorful names as Copperas Mountain, Storms Station, Nipgen, and Knockemstiff.

If you've never heard any of these names - other than maybe Chillicothe and Bainbridge - then that only affirms that this "X" on the map must be an ideal setting for a wilderness preserve! And it truly is.

Sprinkled through this article is a scrapbook of some of the chance wildlife encounters that occurred in recent years at the Canebrake Ridge tract of the Tobacco Barn Hollow Preserve, as witnessed by preserve caretakers and Arc staff members, Andrea Jaeger and Brit Wood; as well as by visiting researchers and other guest photographers.

Of Ohio's 41 reptile species, a remarkable 41% of them have been observed at Canebrake Ridge to date. This includes 12 snake species, 2 lizard species, and 3 turtle species. Of the state's 39 amphibians, 38% are represented at the preserve, including 8 species of salamanders and 7 species of frogs and toads. In addition, 13 mammal species have been observed. A list of moth and insect observations is underway, which is being stored for posterity in iNaturalist.

Although this inventory is far from complete, it has provided us with a greater understanding of Tobacco Barn Hollow's importance to wildlife. By knowing what species are already here, we can monitor the impacts of our preservation work and make use of this information for future management. We hope you'll enjoy a peek into the quiet, hidden lives of the wildlife at Canebrake Ridge.

Last summer I came across a particularly girthy multiflora rose bush in the woods. I didn't have anything to cut and treat it at that time so I decided to make a mental note of where I was and return back to it later. Just then, I noticed that hanging from one of the tall arching stems was not a withered leaf, but an eastern red bat - dangling like an ornament. I was shaking with excitement because I have been looking for them at Canebrake for years without success. I snapped a picture (below right, by Andrea Jaeger) and thought, "What a clever place for a bat to sleep. No predator would risk getting tangled up in these thorns to snatch a meal." Below left: Beautiful backlit red bat in flight. Photo by Jim McCormac.

The preserve is named after a deep ravine, Tobacco Barn Hollow, or "Backer Barn Hollow" as we call it locally, which lies in the remote roadless heartland of Pike State Forest. It is nestled between two ridges – Mitchell Ridge and Robinette Ridge – and boasts dramatic 500 feet elevation changes between ridgetops and valley floors.

Fragmentation of forests and habitat destruction drives biodiversity decline in this region, just as it does all over the globe. Although Pike State Forest is 12,531 acres in size, it is made up of 13 irregular and non-contiguous blocks of land with numerous privately-held inholdings. It is well documented by field research that the larger the size of the forest, the better a forest community can hold onto its complex of plants and animals. The Arc's Tobacco Barn Hollow Preserve was founded with the purpose of acquiring State Forest inholdings and lands adjacent to the State Forest for the purpose of creating larger forest blocks of land, and thus, better protected forest communities.

Like all of Ohio, the larger Tobacco Barn Hollow region has been timbered in the past, probably multiple times; and farmed wherever the terrain was flat enough to permit. And yet, the sensation of wilderness that emanates out of the larger Tobacco Barn Hollow region is both palpable and legendary. It is no accident that Tobacco Barn Hollow's wild reputation is associated with its long-rumored presence of timber rattlesnakes, a snake so rare that it has been extirpated across most of its original range in the Eastern United States. In this case, that rumor is true.

Less than a handful of places remain in Ohio that support populations, and one of them is Tobacco Barn Hollow. Timber Rattlesnakes are designated as an endangered species in Ohio and their populations are extremely vulnerable. Their greatest threats include intentional persecution by humans, and deadly encounters with farming equipment, and with vehicles when attempting to cross roads. Recent field research has documented multiple numbers of timber rattlesnakes crossing the boundary – in both directions – that lies between the Arc's Tobacco Barn Hollow Preserve and Pike State Forest. The preserve in part exists to help expand and protect the habitat of these vanishing denizens of the Eastern Forest, as well as many other species at-risk.

The Arc's first two preserve acquisitions, known as Morgan Fork I & II, took place in 2007 and 2010 respectively. After those purchases, Tobacco Barn Hollow Preserve lay quietly and self-reliantly for a decade. Contributing to its public invisibility was the fact it was landlocked. The only way for our staff to enter the preserve was on foot, following lengthy easements across private property and

One day Brit and I accidentally came across an ovenbird nest while hiking, despite, we realized later, the parent's best attempt to distract us away from it. We returned a week later at an unintrusive distance and used the zoom on our phones to see that the eggs had hatched and the nest was full of baby birds! Photo by Andrea Jaeger.

Chubbies. These two well-nourished spotted salamanders were found on Canebrake Ridge. Salamanders make up a large percentage of the biomass of healthy, intact Appalachian forests, yet rarely are they ever seen. This is because salamanders are nocturnal and spend most of their time under logs, rocks, and leaf litter, or hiding out in holes in the ground where they can feast on slugs, worms, and other small insects while avoiding becoming a meal themselves. Photo by Andrea Jaeger.

Five-lined skinks are especially common at the cabin.

Adult newts gorge on wood frog eggs each March in preserve ponds.

This is not a luna moth on a mirror but a breeding pair! So beautiful. Photo by Andrea Jaeger.

Newts in the red eft juvenile terrestrial phase are common in our woodlands. Our ponds are loaded with fully aquatic adults.

North American Racers can move at speeds of 10 miles an hour, hence their name. Racers are frequently observed at Canebrake Ridge, but usually just for an instant before they disappear into nearby greenbriers. Photo by Brit Wood.

state forest land to reach our holdings. Entry was a full-day commitment.

In 2020, new opportunities began to stir for the preserve. Privately we received word that for sale were 161 acres of forested land to our north, as well as an adjacent 7 acres with a house. The trees on the 161 acres were medium-aged, but the forest was in excellent health. The sheer size and quality of the larger tract captured our attention.

The sellers were planning to move to Ireland that fall to help their daughter and son-in-law run an ambitious organic farm, and their deadline to sell the property was fast approaching. We raced to turn in a Clean Ohio application to help fund its purchase, and succeeded in closing on the 161 acres that summer. Astonishingly, the sellers then decided to donate their 7-acre homestead to the Arc of Appalachia! We honored the donated tract with its own name, *Canebrake Ridge*, and even today, we still have to pinch ourselves to believe we were the recipient of such trust and generosity.

Today, as we write, Tobacco Barn Hollow Preserve is stirring once again. Presented are two opportunities to expand the preserve. Thankfully, this time both tracts have road frontage. The expansion properties include the 39-acre Sugarbush Hill and the 16-acre Racer's Edge.

Racer's Edge lies at the entrance to Canebrake Ridge. The property is completely forested – that is, except for a clearing along the road that was occupied by an old mobile home that is now abandoned and in deep disrepair. Because this old residence is in the viewscape of the parking lot that will in future years serve as the trailhead for the preserve's trail system, we are eager to undertake a thorough cleanup

Above: The short-tailed weasel is present in the preserve, but rarely do we get a glimpse of them. Below: The thunk-thunk-thunk of chipmunks resounds through the woodlands of Canebrake Ridge in the fall, when our chipmunks fatten up on acorns. Chipmunks are major prey of timber rattlesnakes.

Timber rattlesnakes are not common in Tobacco Barn Hollow but populations have managed to survive and we've been blessed with several sightings. It's a rare and special day to cross one's path. Photo by Jim McCormac.

One day Brit and I were out hiking and came across a box turtle nest that had been partially disturbed. The shells of three box turtle eggs lay empty beside it, their contents likely having nourished a hungry opossum or raccoon earlier that day. Peeking inside the excavated nest, we could see there was still at least one more egg down below. We rushed to the barn and gathered a milk crate and a brick and returned to create a makeshift cover to protect the nest from further destruction. After several weeks, we stopped by to check on the nest and discovered that a hairline crack had formed on the visible egg, and it was moving ever so slightly. Returning later that day, we were elated to see that THREE baby box turtles had emerged. We removed the milk crate and waited at a distance, watching as all three eventually scurried away from the nest and into the surrounding leaf litter. Photo by Brit Wood.

In 2021 naturalist John Howard and I were astonished to find this eastern spadefoot (Photo left by Andrea Jaeger) on Canebrake Ridge after a heavy rain. Eastern spadefoots live in only a few isolated locations in Ohio where they burrow in deep, sandy soils, emerging on moist nights to hunt. When temperatures are right, they emerge in explosive numbers during intensely heavy rains when they will seek out rain-formed pools in which to breed and lay eggs. (Photo right: Spadefoot in its classic habitat) What in the world would this state-endangered species be doing on a dry ridgetop in the middle of a hardwood forest where the soils can hardly be described as sandy? Truth be told, we don't know. A week later a second individual was found not far from the first. Apparently there is a lot more to learn about this rare and elusive amphibian.

Little green herons are common visitors to our amphibian-rich ponds where they find abundant food. We know they like frogs and tadpoles, but are unsure if they have adapted to the well-known toxicity of our common eastern newts.

The smaller parasa moth is just one of many moths in the preserve that belong to the "slug moth" group. Slug moths are generally small in size, but the detailing of their colorful slug-like caterpillars is the stuff of fantasies. Photo by John Howard.

of the property and prevent the possibility of a new house going up in its place.

The Sugarbush Hill property lies east of our main preserve holdings on Morgan Fork Road, just a short distance from the Buckeye Trail. The property's sellers, Gale and Sharon Rickey, began tapping trees in 1986 on their farm as a hobby. The enterprise grew organically and quickly turned into a family business. The Rickey's purchased Sugarbush Hill in the early 1990's to expand their operation. The new acquisition was not only rich in big maples, but it boasted immense specimens of oaks, hickories, and tulip poplars. Because Gale refused to cut his trees for any purpose other than longterm stand improvement, while most of the surrounding privately-owned forests diminished in quality during the 30 years the Rickeys owned their sugarbush, Gale and Sharon's forest just got better and better: older, more beautiful, and much more valuable.

When it came time for the Rickeys to simplify their lives and liquidate some of their assets for retirement, they considered selling Sugarbush Hill, but because of its high timber value, they were certain the trees would be harvested if the land were sold on the open market. They couldn't stand to cut the trees themselves, and they couldn't bear the thought of anyone else doing it either. They reached out to the Arc in the hopes that we might be interested in protecting their woodlands in perpetuity. We took one look at the property's big trees and it superb understory of wildflowers and we assured the couple, "Yes, we are interested. Very interested!" Rickey's sugar bush is now the Arc's Sugarbush Hill tract of the Tobacco Barn Hollow Preserve.

Trails are in the future. In addition to the trails currently under development at Canebrake Ridge, we also have plans to work collaboratively with the Buckeye Trail to create a hiking trail on Sugarbush Hill that will be open to the general public, including hikers following the Buckeye Trail's designated route down Morgan Fork Road, where they pass right by the entrance to the preserve. Watch for upcoming announcements on Volunteer Workdays to install the trail. We'd love to have your helping hands.

The Arc strives to protect the "best of the best" of what remains of Ohio's intact natural communities. All of our preserves are wild in that they are natural, but not all of them are wilderness. The ones that are wilderness are by design. They all share boundaries with the vast holdings of Ohio's state forests. Tobacco Barn Hollow enjoys this good fortune, and here wilderness is secure.

the expansion of GLADYS RILEY
- water, wildflowers & light -

Gladys Riley Golden Star Lily Preserve has already garnered a well-deserved reputation as a state treasure, showcasing the rare golden star lily, rich spring wildflower assemblages, and the beauty of its rugged Appalachian hill country. The proposed expansion will add to the preserve's priceless pedigree with important aquatic features that include the final run of the Rocky Fork (a creek that dissects the existing preserve, a long stretch of corridor bordering the Scioto Brush Creek (the first time the preserve will connect with this larger waterway); and the floodplains associated with both.

An application for the new addition has already been submitted to Clean Ohio for partial funding, and we eagerly await the results. If all goes well, future visitors will see the new parcel's expansive floodplains – currently in soybeans - transformed into native prairie. Prairies are fertile ground for summer wildflowers, bees, wasps, butterflies, and moths. The perennial vegetative cover afforded by the prairie's presence will help restore a functioning floodplain to the Scioto Brush that catches sediment and nutrients while slowing down floodwaters.

The aquatic resources in both the Rocky Fork and Scioto Brush Creeks are exceptionally rich. Extravagantly colored and aptly-named fish – such as rainbow, greenside, and orangethroat darters – flash through Rocky Fork Creek's riffles, while ancient-looking mottled sculpins and blunt-nosed stonerollers skulk among the rocks below the water's surface. Myriad fish, crustaceans, and aquatic insects call this major confluence of waters their home, each a vital link in the aquatic ecosystem's chain of life.

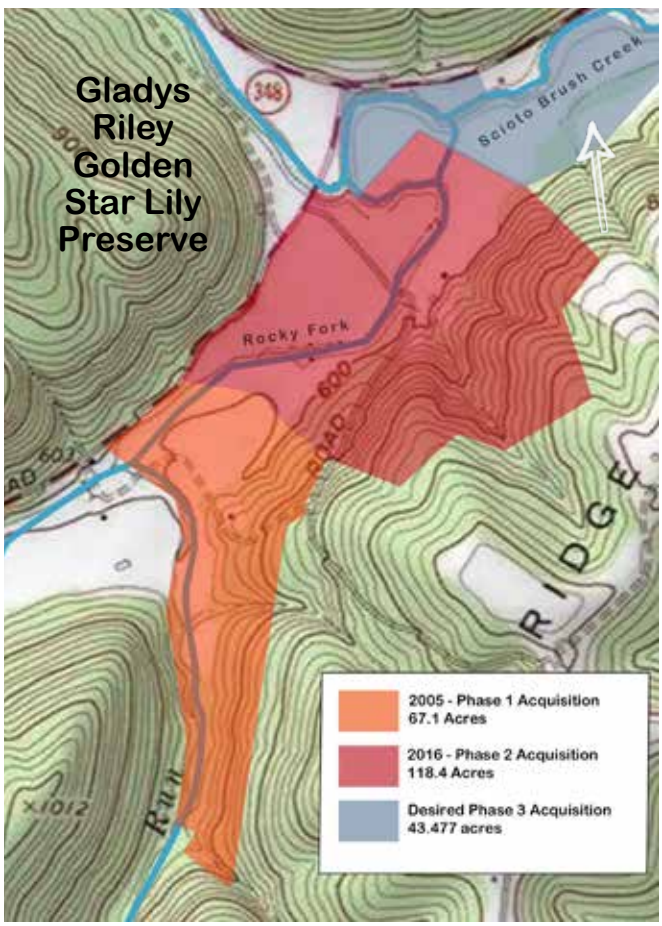
The Rocky Fork tumbles northward out of the rock-strewn highlands of Scioto County's sandstone and shale country before entering Scioto Brush Creek. Other major tributaries of Scioto Brush Creek wend eastward out of the dolomitic karst country of Adams County, mixing their waters. These waterways are perennially remaking themselves. One moment they are placid, burbling brooks; the next moment they are raging torrents - rearranging rocks, boulders, and trees and replenishing the lowlands with minerals, soil, and organic matter.

Each time the floodplains are bathed in floodwaters during winter and early spring, vernal pools bordering the

Top left: Firefly watching during the Arc's 2023 Little Smokies Firefly & Biodiversity Weekend, Photo by Brian Prose. Top right: Golden star lilies. Photo by Jim McCormac.

creeks are recharged and replenished. As the pools warm under the March sun, they are transformed into rich aquatic soups of hydra, daphnia, cyclops, algae, water beetles, fairy shrimp, toad tadpoles and salamander larvae. This flush of life feeds higher animals yet, spreading nourishment in ever expanding circles until even the larger birds and mammals are connected by the silken threads of common unity. The joining of the words "common," meaning shared by more than one, and "unity," meaning joined as a whole – is just another way of saying "community." And saving natural communities is what the Arc of Appalachia is all about.

Fireflies thrive in the damp unmown fields of Gladys Riley where their prey - slugs, snails, and earthworms – flourish, and where the habitat is undisturbed by lights and pesticides. One of the highlights of the Arc's *Little Smokies Fireflies and Biodiversity Weekend* held last June was Gladys Riley's bountiful fireflies. All participants had to do was pull up a chair and sit back. Before them was the time-honored spectacle of thousands upon thousands of glimmering fireflies, covering fields and trees alike. Christmas lights flicker-flashed above the grasses, light bulbs lit up the trees, little grays twinkled like laser lights



Photos beginning above left clockwise: 1) the rich valley of Scioto Brush Creek, hemmed in by mist on a late summer morning by Brian Prose. 2) Riffle at Quiverheart Gorge Preserve, a headwater of Scioto Brush Creek, by Brian Prose. 3) Orangethroat darters by Jim McCormac. 4) Cascade at Gladys Riley Preserve, a headwater of the Scioto Brush Creek, by Brian Prose 5) Central stoneroller by John Howard.

in the grass, and Chinese lanterns shimmered like falling embers above their heads. Mesmerized by the light show, guests did not want the evening to end.

The Arc's master plan for Gladys Riley is to enlarge the parking lot and construct a new third trail that will traverse what we aspire to be the newly-acquired open bottomlands, a trail that will be especially appreciated during firefly season.

The Arc of Appalachia considers long-term profit when managing sites like Gladys Riley – exchanging the short term debits of row-cropped fields with the long-term credits of prairies, functional floodplains, and creek corridors. Imagine what this preserve will look like 50, 100, or 150 years from now.

Here at the Arc, it gives us much pleasure to share the magic of wildflowers, water, and light with visitors near and far. Gladys Riley Golden Star Lily Preserve, endowed as it is with flowing water, tapestries of wildflowers, and the little sparks of summer fireflies, provides many points of connection between people and their homeland, fulfilling our universal yearning to find our place in the cosmos.

Gladys Riley, in so many ways, is a preserve with a golden glow.

Scioto Brush Creek Watershed

Chalet Nivale Preserve

Gladys Riley Golden Star Lily Preserve

2023 STATE OF THE ARC
A SPECIAL REPORT

We are including this first-time ever detailed report on our nonprofit's infrastructure and our highest dreams because the Arc of Appalachia is well positioned right now to enter another period of rapid growth. A base of informed donors is a nonprofit's greatest fuel.

It took 22 years to acquire our first 5000 acres of land. It only took the next 6 years to acquire the another 7000.

OUR FOUNDATION

- The Arc's mission is to preserve the earth's ancient, complex natural communities that were millions of years in the making.
- These communities have survived volcanic eruptions, drifting continents, and colliding meteorites, but today, due to recent human activities, their future is at risk.
- Our geographic focus is in southern Appalachian Ohio, where we strive to protect our region's most intact forest, wetland, and prairie communities.
- Our task is simple and straightforward - we buy back the land on nature's behalf so that we can provide perpetual protection for natural communities and their inhabitants.
- Because communities need large unbroken spaces to survive, our success is measured by the scale of our achievements.

28 years of saving the "best of the best"

Wildlands preservation sometimes feels like we are trying to mend a tattered woven lifeboat in a hurricane. With each crashing wave, the raft frays further at its edges and more species are lost overboard. The smaller the lifeboat, the more quickly the raft breaks apart.

It's true that, in these modern times, communities are under great assault by destruction and displacement, global warming, severe weather events, environmental pollution, invasive non-native plants, and new onslaughts of diseases. Here at the Arc, we are driven to save natural areas as fast as we can.

And yet, despite the challenges, or perhaps because of them, the Arc has much to be proud of. Since 1995, our focus has been on buying up the "best of the best" of the lands that have come up for sale. By design we invest in communities that are the most intact, the best buffered, and the most affordable. Our primary focus has been in Ohio's southern Appalachian counties where population pressure and land prices are the lowest. Here we look for lands that are in the top 5% of Ohio's healthy communities – boasting primeval soil ecosystems and reasonably full assemblages of flora and fauna.

Healthy communities can easily support tens of thousands of species, and that is exactly the kind of complexity we look for. We seek out old forests because they are richer than young ones. We look for intact soils that have never felt the plow or the baking of the sun. We take note of wildflowers, as they are often indicators of low disturbance. Lands that cozy up next to state and national forests get extra points. And we look for water. Wetlands, headwater streams, and river corridors all support higher numbers of plants and animals.

In this fashion, as of this writing the Arc has acquired just shy of 11,000 acres of premier natural areas. Nearly all of our acquisitions are fee simple, and remain owned and stewarded by the Arc. We have negotiated purchase offers, recruited funding, and sat at closing tables 193 times. The Arc has the most splendid landscapes imaginable in its care – truly the best of the best – sheltering tens of thousands of plants and animal species, well over a hundred of which are rare and endangered.

The Arc has been experiencing a rapid growth spurt in the last few years. If we project this pace forward as a theoretical exercise, and if there were no limits on grant and donor money (which of course there are), by 2029 we would have 25,000 acres of nature preserves under our care. Even if we end up experiencing only half that much growth, it is essential we plan ahead. This report shares where we are and our aspirations for the future.

to prepare for future growth, we need just four things: a bucket,

It would please us for our supporters to understand how we go about buying land. Most of our acquisitions are partially supported by grants. Clean Ohio is our largest grant source and it is an exceptionally powerful one. Arc donors provide the required matching funds for our Clean Ohio grants, usually at around 25% of the project cost.

When projects are grant assisted, every $1 in private donations leverages $4 in total funding for most acquisition projects. Because grant outcomes are never certain, we are highly selective about the quality of the projects we submit.

In our early days, cash for acquisitions were funded through standard loans. As our nonprofit matured, we tired of using donor dollars to pay interest and so we slowly – oh so slowly – built up cash reserves that we could borrow from to buy lands, and then pay the fund back later. Officially, we call this the Arc's Revolving Land Fund but, day by day, it's just "The Bucket."

When we find an irresistibly compelling property on the market whose seller isn't willing to wait for us to raise funds, we borrow money from the Bucket and loan it to a nonprofit partner who shares our mission of protecting and preserving land. This nonprofit then buys and holds the land for us, giving us time to secure funding from grant and donor sources. If all goes well, we pay the Bucket back, at least partially so, and recycle the Bucket's monies.

Properties smaller than 10 acres, especially those developed with houses, are rarely eligible for grant funding. If we want them, we must buy them with cash out the Bucket, and then wait for our annual campaign to recharge our reserves. It's costly to buy up little parcels of land, but the accomplishment of creating large, contiguous preserves that can feasibly be protected is worth the investment.

Real estate prices skyrocketed during the COVID years, even here in rural Appalachia. The spike has since leveled off, but the higher land values have held. Lands that were $2500/acre are now selling closer to $4000/acre. The most premier properties of Hocking Hills have risen from $5000/acre to $12,000. Because of the greater demand for land, sellers are a lot less interested in waiting months before a buyer can consummate a sale. Because of all this, we've had to dig deeper into the Bucket than ever before.

Another source of grant funding is Ohio EPA's WRRSP. In this program, a selected nonprofit partners up with a willing municipality, who, in return for sponsoring the nonprofit's acquisition and/or restoration project, receives reduced interest rates on their EPA-administered loans for their sewage treatment improvements.

The Arc successfully engaged WRRSP funding for our $3.2 million 618-acre Tremper Mound Preserve project back in late 2021. We'd love to do more EPA projects. However, WRRSP has one big disadvantage. It usually takes two years to complete project funding, far longer than most land sellers are willing to wait. If we are to use WRRSP more frequently, we will need to procure more advanced funding to buy and hold land.

In the past we have been working off of Bucket levels varying anywhere between empty and $500,000.

In our current work environment, we could capably use a bucket four times that size.

Refilling the Bucket is not a new task for the Arc, nor for its donors. It is essentially what we have been doing for years as part of our annual land campaign. The only thing new is that we need a much bigger bucket to fill.

Special Invitation: Land Buying Partners

Another funding strategy that shows promising growth is working with large conservation-minded philanthropists who are willing to buy and privately hold properties for the Arc while funding is being pursued. If you love wildlands, saving them can be incredibly fulfilling. If interested, contact Nancy at 937-365-1489 or email her at nancyoftheforest@gmail.com.

a chair, an umbrella, and a time-honored tool. so simple, right?

If we asked you, "What is the Arc's greatest limiting factor in increasing its pace of land acquisition?" What would you say? "Money," right?

If so, you would only be partially right. If the Arc were charged with increasing its pace of land buying right this moment, our greatest limiting factor would not be the cash available to buy more land, but the staff to "up our game."

Acquiring a new preserve is a lengthy process. First, we have to locate land worthy of buying. Purchase offers must be negotiated and written, and appraisals and title work ordered. And, unless we receive an extraordinary amount of money, grants need to be written and hopefully awarded to effectively stretch the donation dollars.

One fully trained fulltime employee, solely dedicated to land buying and working alone, could buy roughly six properties a year and leverage one to two million dollars of grant money with a salary investment of only 5%. If one of the land projects was of exceptional quality, with a bit of cleverness an experienced employee might be able to buy the land without using any donor money at all. Although such outcomes are not very common, neither are they rare. A trained land buyer is worth his or her weight in gold.

All land acquisitions have two things in common: a staff member on the front end to purchase them, and one or more staff members on the back end to steward them in perpetuity.

Say, just for fun, that you came to the Arc and offered to donate $75,000 a year to us for ten years running, on the condition that we could either use the money directly for land acquisition, or fund a staff member who was dedicated to land acquisition. If you made that offer today, we would unhesitatingly choose the new staff member for the simple reason we could make your gift go a lot further.

Actually, the most powerful gift a donor can make to the Arc is one that is unrestricted. That way we can use the gift to strengthen our most limiting factor at any particular time. We always know where we need money the most, and donors can be reassured that because of our passion and ambition, there is no fat in our organization. We are a lean, mean land buying machine!

Arc staff leaders, Nancy and Andrea, perform most of front end tasks of the Arc's land buying campaigns. Besides land acquisition, the Arc's Office Team - Nancy, Andrea, Seth, and our part time staff members, Kayla and Cat - also handle all of the Arc's educational events, publications, design work, website maintenance, social media, visitor services, bookkeeping, and Museum hosting. They have a ton of balls in the air at any one time. Land acquisition and grant writing are just two of them.

So imagine our delight when donors Kevin Eigel and Marcia Miller asked us earlier this year what we needed the most. The outcome of that conversation was their benevolent offer to fund our first ever fulltime Education Coordinator for the next two years. This will take an immense work load off the Office Team, and allow Nancy and Andrea - already deeply trained - to dedicate more of their skilled time to wildlands acquisition We aim to fill this position by January 1, 2024, and are exceptionally excited and grateful for this opportunity.

Existing Endowment Balances for the Arc's Stewardship Forever Funds			
Umbrella Funds	**Existing Balance**	**Known Bequests**	**Remaining to Raise**
Arc of Appalachia Endowment Fund	$2,273,046	$12,690,000	$5,036,954
Clyde Hobson Dilley	$3,712,718		
Regional Stewardship Hubs			
Hocking Hills	$25,706	$450,000	$3,524,294
Quiverheart Gorge	$51,413	$950,000	$2,998,587
Kokosing-Killbuck	$150,043	$1,650,000	$2,199,957
Conservation Easements			
Conservation Easement Stewardship	$25,706		$3,474,294
Red Stone Farm	$60,200		$539,800
For Existing & Bequeathed Preserves			
Simon Farm (two funds)	$522,562		$1,477,438
Junction Earthworks	$83,904		$1,916,096
Anonymous Private Preserve	$83,034		$516,966
Fund Totals	**$6,988,333**	**$15,740,000**	**$21,684,386**

Note that the values shown in the known bequests column are, by necessity, only rough estimates.

the Arc of Appalachia's umbrella of endowment funds

provides funding for preserve stewardship...forever

The Arc's Endowment Fund balances have more than DOUBLED, from just under $3 million a year ago to nearly $7 million today.

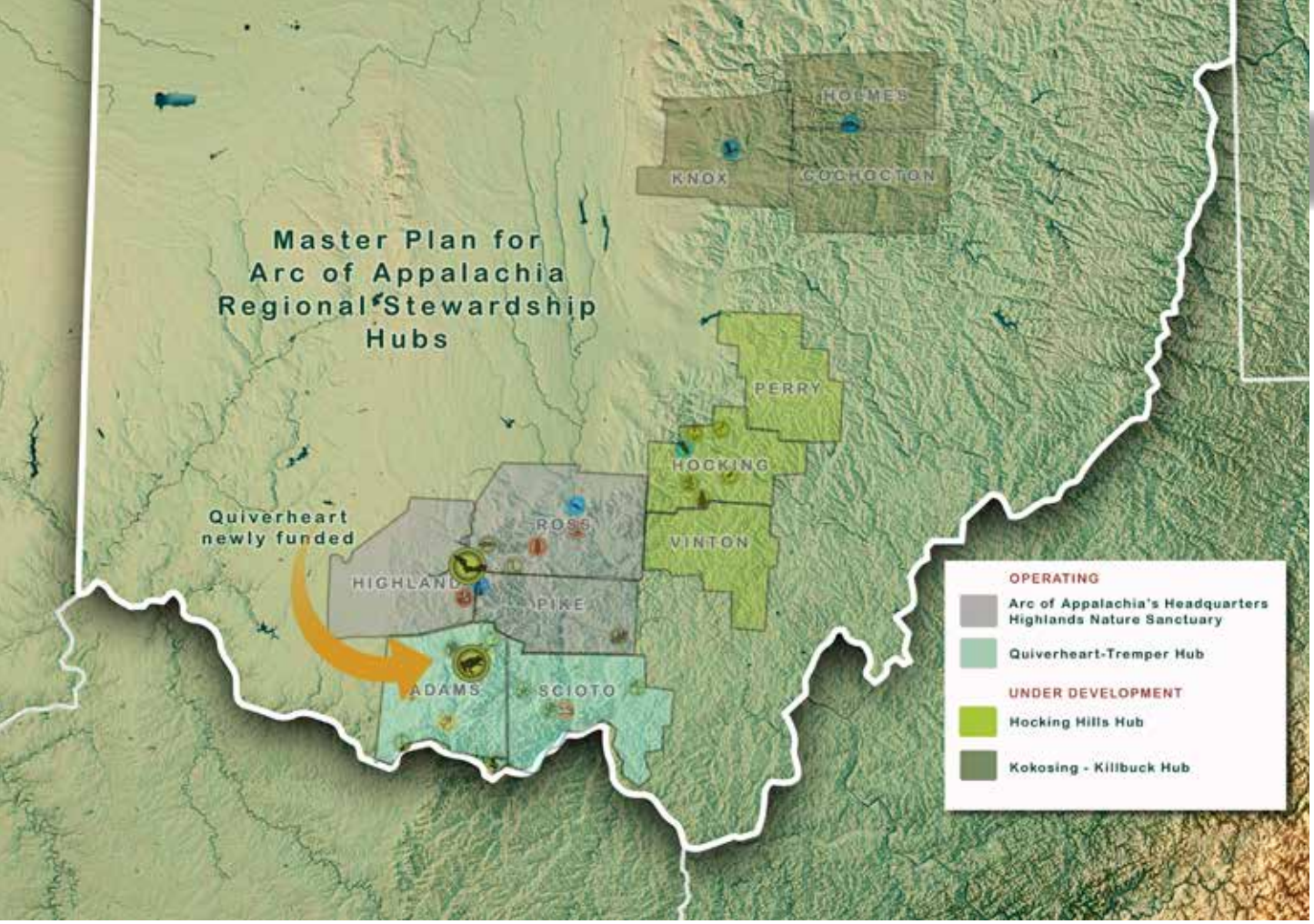
When the Arc of Appalachia was founded 28 years ago, we thought all we had to do was buy back the land and set it aside. "Mission accomplished!" Since then we've learned that we never save a piece of land just once.

Today six Arc stewardship staff members provide the daily service of "re-saving" our preserves. They do all the things you would expect them to do. They maintain 70 miles of hiking trails, build new ones, mow trailheads and grassland habitats, remove tons of non-native plants, and cultivate and support three critical and tightly-knit volunteer groups: Arc Trailblazers, ForestKeepers, and Deer Management Hunters.

But they also do things you might not expect. They are frequently called out to preserves to resolve boundary issues with neighboring land owners, loggers, and utility easement owners. They meet with utility companies to avert high tension lines using eminent domain to cross our lands. They monitor our waterways and alert EPA and neighboring businesses when sediment loads suddenly appear in our streams. They run up and down nearly vertical hillsides to treat the deadly hemlock adelgid. They plant trees in the lower Scioto at Tremper Mound in what is otherwise a vast plain of farm fields. They run after ginseng poachers and fence out ATV trespassers. They pull water pumps, replace hot water tanks, replace electrical sockets, and kick start broken washers. They maintain the Arc's fleet of tractors, trailers, mowers, and trucks that are invaluable to their work, and they assist with facility remodeling and repairs.

Needless to say, it is downright infeasible to acquire nature preserves without having land stewards of this caliber to maintain them. As the Arc continues to grow in acres, so must we grow the number of our staff members.

One Land Stewardship Manager working alone out of a well-stocked equipment center can manage roughly 8 preserves open to the public with trails, and at least that many more preserves that are not open. In addition, one manager can cultivate 50-100 volunteers, who greatly amplify what a single staff member can otherwise do.



last year the Arc's regional stewardship hubs were simply a dream,

but thanks to an anonymous donor & a challenge grant in 2023 our very first regional hub at Quiverheart Gorge is rapidly falling into place

Nonprofits that are forced to raise money for payroll and operations each year are inevitably distracted from concentrating on their main mission. That is why every mature, successful nonprofit eventually leans on strong endowment funds. We aim to be one of them. To date the Arc has initiated several endowment funds (most of them at the Columbus Foundation) that we refer to as our *Stewardship Forever Funds*. These funds are perpetual by design, keeping up with inflation and producing income for both stewardship and office staff at approximately 4 – 5% annually. Gifts to these funds are truly gifts that keep giving forever. We are proud of our progress, as you can see.

With these endowment funds, our goal is to raise $20 million in investments for our primary headquarters and $4 million for each of our planned regional hubs, shown in the map above.

Over the course of the last seven years, the Arc of Appalachia's land base has expanded at a phenomenal rate, from 4,820 acres in 2016 to nearly 11,000 acres in 2023, a 126% increase. In 2016, stewardship was handled by a single, full time staff member. In 2023, we started out the year with three full time staff members in the field and one staff member dedicated to facility management. Additionally, our Land Stewardship Director, Brent Charette, now coordinates the efforts of our stewardship staff across ten Appalachian Ohio counties.

Adams and Scioto counties have more Arc preserves than any other region, and they include the monumental Tremper Mound Preserve endeavor. Because the region's preserves are 40-80 minutes away from our staffing headquarters at the Highlands Nature Sanctuary, our staff members spend a lot of time on the road. This is why the dream of creating a second equipment and staffing center at Quiverheart Gorge had become such a priority.

But even if we were successful in raising $4 million in the endowment fund to support the Quiverheart Hub, where would we ever get the $200,000 necessary to stock the hub with all of its necessary equipment? It had taken 28

years for us to acquire the equipment we currently have at our main headquarters. The new hub at Quiverheart didn't seem likely to manifest anytime soon.

Then, early in 2023, a miracle transpired. An anonymous donor offered us a series of grants. First was the incomprehensible gift of $200,000 to acquire the equipment and infrastructure necessary to establish a hub at Quiverheart. Second was an $82,000 gift for Hickory Hollows, a donation which surged the emergency campaign right over the finish line. Third was a challenge grant of $150,000 a year, for three years running, to operate the Quiverheart Regional Hub.

We were, and remain, thoroughly astonished and grateful. The land stewardship team likes to say, "Teamwork makes dreamwork!" But generosity and partnership on this level were beyond anything we could have imagined!

These grants have made significant capital investments possible for us. A few days after receiving the first grant, Brent stepped into Baxla Tractor Sales and made a bargain sale purchase of a Kubota tractor, batwing bush hog, Exmark mower and trailer, dump trailer, and off-road Kubota RTV for field work. He said it all made him feel a bit dizzy. Eventually his team also found an appropriate used pickup truck, and those wheels now are on the road.

The team's immediate challenge was how to stretch the $200,000 investment the furthest. The region had no maintenance buildings to store equipment. To build them would drain our grant funds. We then noticed two abandoned buildings covered with ivy, one at Tremper and one at Quiverheart. Both were old and presumed to be tear-downs. But after kicking a few walls and tearing back the ivy, we realized both buildings were basically sound and well located. All they needed were some paint, new doors, modern electrical service, and a ton of elbow grease. We love rejuvenating old things and putting then into good use again, so this entire process has been fun.

The third grant permitted us the immediate relief of part-time staff to help lighten our workload this summer. And now as we begin to enter the relative quietude of winter, we will be hiring a new full time land stewardship manager for the Quiverheart Hub. Yes, definitely a miracle.

It is anybody's guess how large the Arc of Appalachia will become in the future, but based on the generosity of our donors and past performance, it will likely be something amazing to witness.

Matching Funds Sought for Challenge Grant

The grant for Quiverheart Hub is poised to provide the Arc with three gifts of $150,000 over the next three years. We received the first grant in July, 2023. We will receive our second $150,000 in July, 2024, if we match it with $75,000. We will receive the third $150,000 in July, 2025, if we match it with $150,000. If you choose to make a gift or pledge to help match either of these two upcoming grants, please include a note with your gift.

Top: Brand new Kubota tractor!!! Bottom: Staff member Sam James hangs newly constructed doors at Quiverheart's equipment barn.

Clyde Hobson Dilley 1939 – 2022
major bequest creates new stewardship fund

The Arc of Appalachia has become the recipient of a new endowment fund created through a bequest by Clyde Dilley. Initially totaling $3.5 million, it is already growing, and represents the largest gift in the Arc's history.

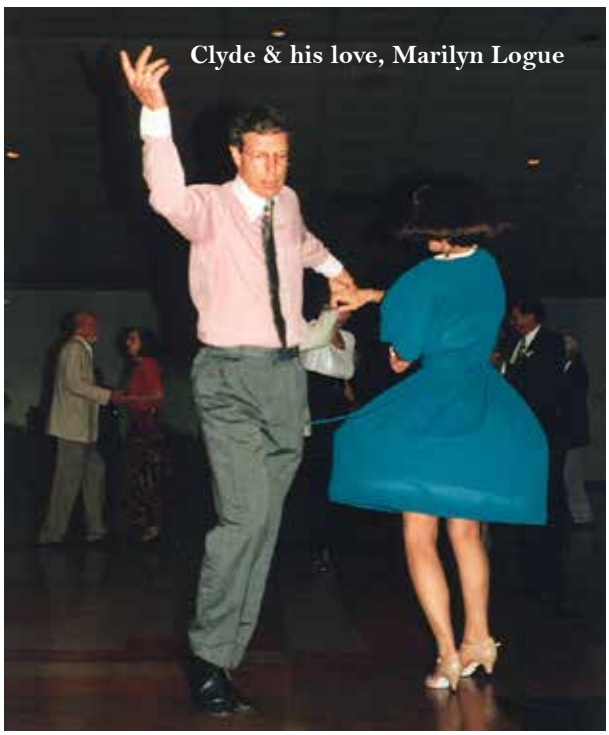
Clyde was born on a rural almond farm in Modesto, California. His parents frequently took the family camping in the high mountains of California where the three boys were taught fly fishing in the cold streams. By comparison, Clyde found farmwork to be tediously hot and dirty. When military enlistment offered him a ticket off the farm, he took it. Seeking out odd jobs near the base, he stumbled across a Fred Astaire ad that offered free instructor training and possible employment. Clyde not became an excellent dancer, but he got the job!

In 1969 Clyde was hired to teach in the Department of Photography and Cinema at The Ohio State University, becoming a full professor and remaining so for his entire career. During this time, photography was rapidly developing as a medium for artistic expression. Clyde rode the wave. Clyde's first course assignment for his students one year was to create a self-portrait - in the nude! Photography was still nested in the College of Engineering at OSU during those years, and we suspect Clyde might have ruffled a few conservative feathers upon occasion.

Clyde lived most of his adult life in Upper Arlington in a modest house. Everyone in the neighborhood knew him because his quarter acre lot was (defiantly, in the opinion of a few disgruntled neighbors) filled corner to corner with native trees and wildflowers. Clyde kept a life list of 100 species of birds passing through his property.

Clyde bequeathed his home as well as his investments to the Arc, and he asked our staff to recycle everything we could when we readied his home for sale. His truck is now the stewardship vehicle at Tremper Mound. We composted his lumber scraps and his old herbs and spices. We finished up his shampoo and toothpaste and re-used his paper clips and pens. His handmade sawhorse now supports our apple grinder at our annual Sorghum Festival. We hung Clyde's handmade bluebird house, the same one that earlier held his ashes, near the Spirit House at the Highlands Nature Sanctuary, affixing Clyde's military dog tags to the box so they could sway in the breeze. We are delighted to report the bird box was occupied by bluebirds last summer.

"Clyde, we love and appreciate you. True confession: we still have your last two voice messages saved on our phone. So long as those of us who knew you remain on this earth, your singular personality will never be forgotten. And so long as the Arc endures, you will always be remembered as one of its greatest philanthropists."



Clyde & his love, Marilyn Logue

employing the power of conservation easements

The state of Ohio has 26.2 million acres of land. How much of that land would you like to see preserved?

In the Arc's quest to "save the best of the best" of Appalachian Ohio's wildlands, we are committed to continuing our pursuit into the far-flung future. The question that plagues us though, is that given the fact that time is running out to buy intact wildlands, is there more we could and should be doing? And should we also be attending to natural communities that are not quite so pristine?

We believe the answer to both those questions is "yes."

If we are going to preserve LOTS more land and do it quickly, there is really only one tool up for the task - the time-honored vehicle of the conservation easement.

There are some key advantages of employing conservation easements as compared to making outright purchases. One, there is no initial outlay of money by the nonprofit other than time, and thus the pace is potentially much faster. Two, the protected lands continue to remain in the tax base, supporting the communities in which they are embedded. That means there is little opposition. Three, there is always the chance that the current owners of the land will be willing to perform valuable stewardship on behalf of the land. If so, such stewardship is self-directed and at no cost to the nonprofit.

There are, however, a few key disadvantages to conservation easements, which is why the Arc hasn't jumped on the bandwagon before now.

One, conservation easements are extremely time-consuming and complex to construct, requiring more hours than even an outright purchase. Two, because easements represent a major donation and self-sacrifice on the part of the owners, land owners are usually reluctant to assist with the substantial costs borne by the nonprofit. Those costs include initially negotiating the easement, annually monitoring it, orienting future owners of the land, and defending the easement in court, if need be. Three, although easements succeed in protecting the land from development, resource extraction, and fragmentation, they offer no guarantee that future land owners will practice

good stewardship. Four, because conservation easements protect private land, there is no public access. Without public access, there is seldom outside financial support.

Bottom line, conservation easement programs are expensive to manage, but even harder to fundraise for than outright acquisitions. That's been enough to stop us in our tracks until now. Because of these costs, there are many landowners interested in putting conservation easements on their lands that haven't yet found a willing nonprofit to perform that service for them.

What has happened, then, to change our minds about taking conservation easements more seriously? The answer comes from the teachings of the Arc's amazing donors.

Our nonprofit ran for its first 25 years on the premise that our donors were only willing to donate money for land acquisition, not long term stewardship. A few years ago, we took the chance to tell our donors what it really takes to support sustainable wildlands preservation on both the front end and the back end of an acquisition. And guess what? Our donors proved us wrong. They were not only interested in the romance of wildlands preservation, but equally so in its reality. As you will read elsewhere in this special report, Arc donors have proved their willingness to invest their dollars wherever it provides the most successful

The Arc holds a conservation easement on Red Stone Farm's vast wetlands. *Self-portrait by Drausin Wulsin.*

outcome. In short, we've been underestimating our supporters. Fortunately, we are capable of learning!!

Now that we are more enlightened, we have re-examined our capability to potentially administer a hefty conservation easement program. As in all things, it's all about securing the funding, and we have some new ideas on how to go about it.

We believe the Arc is now strong and skilled enough to organize and train the core volunteers that are needed for a conservation easement endeavor. We are currently recruiting people who are willing to put more land under protection through not only monitoring existing easements, but initiating new ones. We are looking for people who sincerely like people, have decent computer and social media skills, and are willing to take an Arc-sponsored training course to be offered sometime in 2024, held both online and in the field.

The curriculum will teach volunteers the IRS definition of eligible conservation easements, the components of a standard easement agreement, how to assess baseline data, and the often delicate social skills involved in co-creating the terms of a conservation easement with landowners.

We estimate that one Arc staff member dedicated entirely to conservation easements could handle the cultivation of a couple dozen corps volunteers, and with their help, eventually oversee as many as 80 easements, representing the protection of anywhere between 8,000 and 15,000 acres.

How would we fund such an endeavor? Based on what our donors have taught us, it is reasonable to believe that if we explain our stewardship costs to our conservation easement landowners, enough of them will be inspired to make large enough donations or bequests to an endowment fund that will sustain one or more full-time conservation easement coordinator.

Earlier this year we created and seeded a dedicated endowment fund at the Columbus Foundation specifically for this conservation easements, and it is ready to accept donations. We estimate that in order to be sustainable, each conservation easement staffing hub would require endowment monies totaling roughly $3.5 million.

If this idea works, and we think it will, it can be replicated for growth, eventually creating multiple regional hubs for conservation easements across Appalachian Ohio. Protecting wildlands would only be limited, then, by the number of people in Ohio desiring secure protection for their private wildlands. We suspect those numbers are far from small.

For now, we will begin as we have begun all our new endeavors. Start small, but plan for growth!

Recruiting Volunteers for our new Conservation Easement Corps

Interested in learning how to represent the Arc in facilitating conservation easements with interested private land owners? Members will be taught how to help owners put an easement in place, and how to monitor conservation easements long term. For more information, call **937-365-1935** or email **arcpreserveinfo@gmail.com.**

Below: Tim Pohlar's daughters, Rose and Quinn, frolic near the man-made stepping stones installed by our Stewardship Team at the stream crossing at God's Country Trail, Highlands Nature Sanctuary. Photo by Tim Pohlar.

arc trails - more than paths in the woods

By Brent Charette, Director of Land Stewardship

The Arc's compelling landscapes, coupled with our staff's artistry and instinctive prudence, is creating an exceptionally fine and ever-evolving trail building team.

When we lace up our hiking boots, grab our daypack stocked with binoculars and field guides, we also carry with us something that weighs nothing at all, yet it profoundly influences our natural experiences. Each of us brings with us a rich mixture of treasured memories and mental snapshots from hikes of yesteryear. For many of us, these precious experiences are tied directly to specific landscapes. Perhaps you have the mental image of a favorite place in front of you right now. Trails that are the most memorable are ones that combine art and science in a cheek to cheek dance, where beauty and functionality are closely aligned partners.

Here at the Arc, we know that how the trail "gets us there" carries as much weight as "where we are going." Arc of Appalachia trails are not boulevards. They are paths intended to engender intimacy with the environment. We want our visitors to be immersed in the natural world, not apart, above it, or beside it. We want hikers to be embraced by the precious ecosystems that we all have the responsibility to hold as tenderly as a beloved child.

Hiking the trails around the Appalachian Forest Museum at the Highlands Nature Sanctuary is an encounter with these kinds of paths. Countless people have been profoundly influenced by the beauty of the Valley of the Ancients and the Etawah Woods trails. One man deserves the lion's share of the credit for these trails' understated harmonious stonework.

Floyd Stanley started working at Seven Caves when he was 12 years old and he remained there his entire life. It is said that he built 4,000 feet of steps, arched bridges, retaining walls, and stone pathways. To quote the *Historic America Landscape Survey*, "he uses the local limestone with a workmanship that so closely blends with the native rock in places that his masonry work is undetectable. It is pleasant to walk on his trails and over elements of the cultural landscape that Stanley spent his lifetime creating." We don't know where Floyd lived or where he now rests,

Above: Rock stepping stones on the Eagle's Aerie Trail at God's Country, Highlands Nature Sanctuary. The rock steps are so natural a hiker would never guess they are actually hydro-cemented to the bedrock below to resist them from being shifted by floodwaters. Photo by Tim Pohlar. His daughters, Rose and Quinn play at the water's edge.

Floyd Stanley's gorgeous masonry that was constructed at Seven Caves 100 years ago survives to inspire Arc staff and present day Highlands Nature Sanctuary visitors alike. Floyd achieved a level of excellence that we aspire to today.

Trails to be completed by year-end 2023

Kamama Prairie	3.5 miles
Quiverheart Gorge (phase 1)	2.0 miles
Killbuck Swamp	2.5 miles
Tremper Mound (phase 1)	1.5 miles
Honeycomb Rocks	3.0 miles
Ohio Hanging Rock	4.5 miles

Trails projects to begin in 2024 with an estimated two-year completion date

Tremper Mound (phase 2)	3.5 miles
Quiverheart Gorge (phase 2)	1.5 miles
Tobacco Barn Hollow	3.5 miles
Cliff Run	1.5 miles

Trails projects anticipated to begin in 2025 or beyond

Big Cola	3.5 miles
Sylvan Deep	1.5 miles
Reslience	3.5 miles
Hickory Hollows	2.5 miles

but we tip our hats to Floyd Stanley and the network of human-nature relationships his work still fosters today.

Floyd understood something which merits contemplation, and that is: witnessing the beauty of the natural world and loving the natural world are inseparably bound. Floyd's connection and love for the natural landscape becomes our own love when we physically connect with his work. His trails, steps, and bridges – still sound after all these many decades - become restorative connections, linking visitors to the world beneath their feet.

Floyd's artistry mirrors the legacy of the Civilian Conservation Corps (CCC), whose work continues to inspire us today. Thousands of young men worked in over 100 camps during the depths of the Great Depression in Ohio's parks and forests. The CCC undertook lasting projects such as bridges, picnic shelters, and trails. The work of these 18 to 25 year olds was characterized by their natural blending of stone and timber. Developments in Fort Hill, Hocking Hills, Serpent Mound, and Scioto Trail still bear their fingerprints.

Our staff has also been mentored by such modern-day craftsmen as David Conley, whose splendid masonry can be seen along Arc trails. His artistry is almost indistinguishable from the earlier craftsmanship of Floyd and the CCC. His skill in constructing trail improvements with stone and concrete in the Arc's remote backcountry, far from electricity and pumped water, has given us the confidence to believe that if David can do it, perhaps so can we. Because of David, we dare to try, and because we try, we learn.

We begin a new trail with the blank canvas of a unique natural area. We spend hours discovering the route that best frames the preserve's features in a way that is dramatic and striking. The design stage takes considerable time, discussion, and, at times, impassioned debate.

To execute the actual trail installation, we rely on our well-stocked "tool box" of mattocks, rotary hammer drills, sledge hammers, rebar, angle grinders - tools that our donors have generously supplied us with over the years. Trail construction itself is demanding, back breaking, labor-intensive work. In order to minimize the steepness of our trails, we use mattocks to cut against the slope until the trails are narrow but level, a task that requires moving tons and tons of soil and rock.

Such work is literally not for the faint of heart. It takes anywhere from 160 to 200 labor hours to build a mile of trail, at a cost of somewhere over $5,000 per mile. Yet, the trails that our stewardship team constructs will outlast the lives of the youngest of our crew members.

The last phase of trail construction is the installation of signs – always a satisfying day for us.

Each preserve presents unique opportunities and difficulties associated with its terrain and natural history. At Kamama Prairie, for instance, we were challenged by how to present the grandeur and richness of the prairie. Much

Top photo left page: Endurable sandstone slab steps were constructed at Saltpeter Cave at the Honeycomb Rocks Preserve from locally collected materials. Top Left: Land Manager Ethan King ponders how to overcome the challenge of the creek crossing presented at Quiverheart Gorge Preserve. Top right: Ethan King is hard at work cutting rebar and pouring a cement walkway that will anchor the bridge which is in the process of being built. All three photos were taken by Tim Pohlar, Arc Land Manager and Ethan's colleague.

thought was applied to how the prairie would be framed in hikers' eyes as they crossed the divide between forest and grassland. Our chosen route was designed to surprise hikers with a sudden, dramatic view of the expansive grasslands.

Kamama's trails are primarily maintained by mowing, and thus we needed to build a bridge wide and sturdy enough to support the weight of tractors. We found a solution by recycling metal frames foraged from old RV's we had pulled out of another Arc preserve as part of its cleanup. These ready-made, hefty frames allowed our staff to meet the bridge's size and strength needs, and yet we still were able to build the entire bridge in less than two days! It is gratifying to be able to reuse materials that would otherwise have just become scrap and landfill fodder. This is an environmental win - win!

At Quiverheart Gorge Preserve we had to devise a way to physically get hikers down into the gorge, and then cross the creek over a bridge sturdy enough to survive flash floods, all without distracting their view of a glorious waterfall and its boulder-strewn stream. Cement, rebar, chiseled pathways, century-old wooden beams, and repurposed aluminum I-beams were all elements of the applied solution.

Some of you took the opportunity of hiking Honeycomb Rocks at our recent Donor Gathering. A significant hurdle we had to overcome in installing the trail at that preserve was navigating its signature rock feature, Saltpeter Cave. We considered bridges and poured steps, among other things, but we settled on painstakingly chiseling away just enough sandstone to create a narrow enduring pathway. The crew then gathered extremely large slabs of sandstone to create natural steps that bring hikers into the feature, and another set on which they exit on the far side. The final trail design respects the inherent natural beauty of a geologic feature that was sculpted by Mother Nature, herself, over thousands of years.

Building a trail is an act of faith in the power of nature to set people's hearts on fire. It is our earnest desire that our offerings of goodwill and honest sweat will yield new harvests of nature enthusiasts for generations to come.



TOP LEFT: Craftsman David Conley constructing 80 concrete steps on the Barrett's Rim Trail to navigate its dauntingly steep descent into the Rocky Fork Gorge. MIDDLE: Sandstone stepping stones carry hikers across a wet spot at Rock Run Preserve. RIGHT: The crew constructed a staircase at Quiverheart Gorge Preserve using century-plus old beams that were recycled from a deteriorating mill house at the Highlands Nature Sanctuary. All photos by Tim Pohlar.



ABOVE LEFT: Arc Land Manager Elijah Crabtree drives rebar anchors trailside at Ohio Hanging Rock Preserve. Photo by Tim Pohlar. MIDDLE: Land Manager Tim Pohlar sits on a metal beam support for a new bridge. The beam was recycled from an abandoned house trailer. Photo by Ethan King. RIGHT: Stewardship Staff Sam James and Tim Pohlar perform the final touch by erecting signs at the newly opened trail system at the Arc's Kamama Prairie Preserve. Photo by Elijah Crabtree.

Top right: Female ruby-throated hummingbird on native trumpet honeysuckle. Bottom: Yellow-throated warbler on white oak leaves. Both photos by Jim McCormac.

a tribute to Jim McCormac

By Nancy Stranahan, Arc Director

This year, inspired by the process of writing the opening essay on the Romantics, I had the privilege of deeply pondering what it means to be a naturalist. I was pleased I was able to get a little closer to its core.

A naturalist is a person who combines the pursuit of holistic knowledge - by integrating multiple disciplines of science - with a pursuit for truth and beauty through the arts. A naturalist spends much of his or her waking hours outdoors, curiously and patiently watching what goes on "out there" while responding through the medium of paintings, writings, photos, and poetry. A naturalist is always a teacher - someone who overcomes their natural inclination toward introversion in order to share their lens on the natural world with others. Most of the above is done, I should mention, without pay. Being a naturalist is not a profession. It is a lifestyle and a calling.

Ohio has a treasure in its field researchers, environmental protectors, nature artists, conservationists, science professors, biologists, and nature interpretors. But no state in the union boasts more than a few handfuls of true naturalists, and thus naturalists should be recognized as the precious rare and endangered species that they are.

I wish to pay tribute to Jim McCormac as the consummate naturalist. His hours in the field are beyond counting, his knowledge of the natural world is encyclopedic, and he knows the state of Ohio's natural landscape more intimately than most of us know our own backyards. That would be enough superlatives to permit Jim to rest on his laurels. But, instead, he has used this well earned reputation as a mere stepping stone in the pursuit of a much higher mission - to inspire people to respond to nature with compassion, concern, awe, and wonder.

Jim leaves no tools untouched in his quest. If you are lucky enough to be on a hike with Jim and you come across say, a small caterpillar, he will immediately share a short and fascinating interpretive story that will inevitably turn into an ecological fable before it ends. But he always starts his stories out in the same way, with "Oh, look, isn't this cool?" And somehow the way he says it, with such earnestness and authenticity, you immediately agree, "It surely is."

During one of the Mothapalooza weekends, I recall a time when Jim was trying to think of a way to illustrate the impressive scale of a hickory horned devil caterpillar. "It's as big as a hotdog, for crying out loud," he said. He picked up a hotdog bun left over from lunch, nestled the caterpillar inside, and snapped a picture. Mission accomplished!

And Jim takes pictures, LOTS of pictures. For those of us who are more chairbound, Jim shares the dividends of spending so much time in nature with his readers, reminding us of the magnificent living world we live in. And he shares his photos with generosity.

Jim, thank you for gracing the pages of this news magazine with what represents a lifetime of hours in the field. Thank you for sharing yourself so generously with the world. And thank you for being the earth's best advocate.

ARC OF APPALACHIA - 2024 EVENTS

In pursuit of nature literacy, stewardship & connection

17th Annual Wildflower Pilgrimage -April 19-21, 2024

Spend your spring in the sublime company of southern Ohio's most beautiful wildflowers! Join us for two days of guided hikes - taking you to some of the showiest wildflower displays in all of Eastern United States. Hikes are in small groups and are led by some of Ohio's most talented botanists and interpretive naturalists. The event headquarters is at the Highlands Nature Sanctuary and includes two days of field trips, three delicious meals, and two evening presentations. Our keynote speakers this year are two highly recognized naturalists: Julie Zickefoose, wildlife author, expert birder, and watercolor painter; and Mary Parker Sonis, an exceptionally talented wildlife photographer from Virginia.

Little Smokies Firefly & Biodiversity Weekend - June 14-16, 2024

Spend a weekend in the heart of Shawnee State Forest, visiting many of the Arc of Appalachia Preserves in the region. By day we will explore the extravagant LIFE of early summer, celebrating its diversity. At night we will revel in firefly showcases, including the mystical synchronous fireflies, the falling embers of Chinese Lanterns, and the great Photuris showcases that turn the river corridors into ribbons of light shows. Lodging has been reserved for registrants in Shawnee State Park's cabins and lodge rooms.

Mothapalooza -July 19-21, 2024

Mothapalooza is a celebration of the night. Participants will be able to witness over two hundred species of moths and other nocturnal insects attracted to our many light stations. Expert hosts at these light stations will aid in moth identification and natural history. Night stations hubs are at the Highlands Nature Sanctuary and Pike Lake State Park. Daytime field trips explore the rich natural history of the region by visiting nearby Arc of Appalachia preserves. Event includes two evening presentations, afternoon field trips, and three meals.

Tree People: Forest Literacy Field Trips - August 24, 2024

What would Ohio look like if people – LOTS of people – knew their trees? What if Ohio boasted the most forest-literate residents of any state in the nation? What would change? All things good; all things life-supporting. The Arc will be hosting two dozen forest literacy hikes all across Ohio; all at the same time and day. The field trips will be led in small groups by expert teachers who are passionate about sharing their craft to help you on your sylvan journey. Our goal is to transform your perception of nature as a "wall of green" into a community of distinct tree species that will one day become your familiar and cherished friends.

The 40th John R. Simon Sorghum Festival - Sept 28-29, 2024

The Arc of Appalachia has the honor and privilege of bringing back the John Roger Simon Sorghum Festival, a beloved annual event that, until retired in 2018 due to aging organizers, had run continuously for 37 straight years. It is now back and thriving! The festival takes place on the 5th generation Simon Family Farm outside of Portsmouth, OH, and was founded by John R. Simon to not only demonstrate and sell delicious sorghum molasses from cane grown on-site, but to celebrate the rich heritage of Appalachia through the demonstration of time-honored rural Appalachian arts and skills, incuding sorghum syrup and traditional music.

Yellowthroat warbler adds its own splash of color to a native wildflower prairie. Photo by Jim McCormac.

A gift to the earth is the ultimate investment in community building

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7660 Cave Road, Bainbridge, OH 45612 arcpreserveinfo@gmail.com 937-365-1935

ARC OF APPALACHIA

An ephemeral cosmos in a tiny pool of water. Hydra in an Ohio vernal pool live in a vibrant stew of life. Photo by Sam James.