OCTOBER - DECEMBER 2023 VOL. 27 / NO. 4

Brown Family Environmental Center FIELD NOTES



Pawpaws: Ohio's Native Treasure

BY DARYA AMINIA '25, BFEC STUDENT MANAGER AND CLAIRE HAYNES, BFEC POST-BACCALAUREATE FELLOW

It was during my freshman year, on one of my first visits to the BFEC, that I stumbled upon the mysterious and captivating world of pawpaw trees. As I wandered through the vibrant autumn landscape, the crunch of leaves beneath my feet echoed my sense of adventure. The pond glistened under the gentle sun, and the picnic pavilion stood quietly amid the natural splendor. But it wasn't just the picturesque setting that drew my attention; it was the peculiar, oddly-shaped fruit scattered around the area.

With a mix of curiosity and excitement, I picked up one of these enigmatic fruits and examined it closely. They were pawpaws, Ohio's official native fruit. Little did I know that this chance encounter would spark a fascination that would captivate me for the next two years.

Fast forward to today, and my obsession with these remarkable trees has only deepened. The more I learn about pawpaws, the more I am compelled to share their

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incredible story with everyone. These trees, nestled in the heart of BFEC, hold not only a delicious secret but also a wealth of ecological importance, cool biochemistry and nutritional value.

NATIVE HISTORY

The history of the pawpaw tree is a fascinating tale that spans centuries and reflects the cultural and ecological diversity of Ohio and the broader United States. Large concentrations of pawpaw seeds discovered at archaeological sites of early Native Americans serve as a testament to the enduring importance of this fruit. It was not only consumed but also celebrated at seasonal feasts, underscoring its significance in indigenous cuisine and culture. The pawpaw tree, scientifically known as Asimina *triloba*, stands as a living testament to Ohio's rich natural history. Linguistically, the pawpaw's relevance to indigenous peoples is evident in place names such as Natchitoches in Louisiana, which translates to "pawpaw eaters" from the Caddo word "nashitosh." Additionally, the Shawnee word for pawpaw, "ha'siminikiisfwa," translates to "pawpaw moon," signifying the month of September when pawpaws ripen, further emphasizing its seasonal significance. The Cherokee people, too, found multiple uses for the pawpaw tree, extracting strong fiber from its inner bark. As the United States evolved, enslaved Africans also discovered the pawpaw and its fruit. Pawpaws became a valuable addition to their diets, providing much-needed diversity in a culinary landscape marked by nutritional monotony. In some enslaved communities, pawpaws even played a role in folk medicine practices, showcasing the adaptability and resourcefulness of those who incorporated the fruit into their way of life.

In the modern era, the Ohio Pawpaw Festival, established in 1999, has revitalized public interest in this remarkable tree and its unique fruit. In recognition of its cultural and ecological significance. Ohio officially designated the pawpaw as the state's native fruit in 2009. Beyond Ohio's borders, the resilient pawpaw tree is gaining recognition nationwide as a potential solution for farmers grappling with the challenges posed by climate change and food insecurity. Its ability to thrive in diverse conditions and produce nutritious fruit makes it a valuable asset in efforts to address these pressing issues.

ECOLOGICAL IMPACT

Beyond their mouthwatering fruit, pawpaw trees play a pivotal role in supporting local ecosystems. Squirrels, raccoons, possums, foxes and even bears all rely on these trees as a vital food source. Yet, their significance doesn't end there. Pawpaws are champions of conservation, providing a haven for rare species like the zebra swallowtail butterfly, whose existence hinges on these trees.

COOL BIOCHEMISTRY

Nature often conceals its wonders beneath the surface, and pawpaws are no exception. They boast an arsenal of biochemistry, specifically acetogenins. These toxic molecules serve as a natural defense mechanism against herbivores. This intriguing aspect of pawpaws extends to the zebra swallowtail butterflies, which accumulate these toxins in their diet, making them poisonous to potential predators.

Within the realm of medicine, pawpaws have not gone unnoticed. Annonacin, found within these trees, holds promise as a potential anticancer agent. While research is ongoing, the presence of such compounds highlights the untapped potential of our natural world.

NUTRITION

Pawpaws aren't just a treat for wildlife; they offer a wealth of nutritional benefits for humans, too. Compared to many other fruits, pawpaws are relatively high in protein and fat, making them a well-rounded option. They also pack a nutritional punch, boasting three times the vitamin C of an apple and twice as much as a banana. Additionally, they contain double the riboflavin of an orange and a generous amount of niacin.

However, it's important to note that pawpaws also contain small quantities of acetogenins, which give the leaves and bark an unpleasant taste for most animals. While some studies suggest that these compounds could have potential anticancer properties, consuming the fruit is not a guaranteed cancer prevention method. Some individuals may experience allergy-like symptoms after eating pawpaws, such as headaches nausea, and rashes, though these reactions are relatively rare and typically short-lived.

PICKING THE PERFECT PAWPAW

If you're eager to try this unique fruit, remember to only pick those that have fallen to the ground. This is when they're ripe and ready to eat. Cut the ripe fruit in half across the middle, squeeze the flesh from the skin into your mouth, and then spit out the seeds. Avoid eating the skin and seeds, as they contain toxins.

Pawpaws are more than just delicious fruits; they're a vital part of Ohio's natural heritage, a source of nourishment for wildlife, and a potential wellspring of medical discoveries. So, the next time you visit BFEC in the fall and spot these intriguing fruits beneath the pawpaw trees, take a moment to appreciate the richness of Ohio's native flora and the hidden treasures that lie within it. My journey with these remarkable trees has been nothing short of transformative, and I hope that by sharing this knowledge, you too will

Leaves, stems and flowers The drawings on this page, by **Claire Haynes, illustrate the** parts of the pawpaw tree.

be captivated

by the wonder

of pawpaws.

Summer Science: A Forest's Value

I began my summer a little unsure of how I would be spending it. I knew what general question I wanted to research, but what that would actually mean day to day hadn't been decided.

The gist of the project was to estimate monetary values for the ecosystem services provided by the Brown Family Environmental Center lands. Ecosystem services are the benefits that a green space provides to those who live around it, experience it, learn in it, breathe the air it has purified, or somehow experience a better life in any way because of its existence. Despite how important these services are, they are often undervalued or ignored when compared to ecosystem goods such as food, water or lumber.

Ecosystem goods are traded on markets, allowing them to be valued and compared. In terms of ecosystem goods, it is easy to tell how much value is gained (and thus, theoretically, how much better off society is) when switching land from say a tree plantation to a crop field. But what if ecosystem services are considered? What if we consider how much pollution the tree plantation had been filtering? The carbon it had been sequestering? Such ecosystem services can in fact be valued, but it takes a few more steps than with ecosystem goods.

It turns out that there are many possible approaches to assigning monetary values to such services. Some methods, for example, involve reviewing previous reports to find comparable

study sites and then transferring values to the new site of interest. This involves a lot of computer work, so I was happy to discover a different approach that allowed me to spend most of my time outside. I would use local field data and i-Tree Eco, a set of software tools developed by the U.S. Forest Service. Eco performs many of the complicated equations required to produce values for the benefits provided by wooded areas. This limited the scope of my research to forested areas and their associated service values, but it made the most sense.

With the math mostly taken care of by i-Tree, it was my responsibility to collect the field data. This involved walking to randomly placed GPS points in the BFEC forests and identifying and measuring every tree within the circumference of a sampling plot centered on those points. If the woods were nice and open and the trees easy to identify — like, for example, the black walnut, American elm and Ohio buckeye forest on the back of the River Trail — this could be a very pleasant day. If it was a younger forest, perhaps one whose understory had been invaded by Japanese barberry or multiflora rose, it could be a little less fun.

Ultimately, I am (mostly) very glad that my summer involved actually being in the ecosystems that I was studying. It can be useful and interesting to produce monetary values for ecosystem services, and sometimes it is the only way that a piece of land can be represented if it is managed within a system based on balance sheets. That said, doing so risks completely forgetting the land itself and all that it holds. I met many charismatic wood-boring beetles that I never would have even known if I had not been there among the rose bushes. While it is interesting and maybe even useful to translate the value of a forest into a metric that we humans are comfortable dealing with, one must at least acknowledge the many values that innumerable organisms experience from it as well.

But, if you must know, the (very) rough value of the benefits provided by forested areas of the BFEC is approximately \$167,600 per year. \$74,400 comes from carbon sequestration and \$93,200 from pollution removal. These are only two of many ecosystem services provided by forests.

The value of a forest

With the right tools, researchers can determine a forest's economic benefit. The forests at the BFEC provide, roughly \$167,600 per year in value through carbon sequestration and pollution removal.



The Queen of Gambier

BY FRANCES CANNON, MELLON SCIENCE AND NATURE WRITING FELLOW

When I arrived this summer in Gambier to join Kenyon's incoming faculty, one of the first things that I noticed was the abundance of stunning trees. Admittedly, I am a tree nerd, fitting with my position here as a science and nature writer, but the trees of Gambier seemed more majestic than I had imagined. I should have been able to predict this — the College has been around since 1824, and Ohio is a verdant landscape home to a wide range of species, so why would the trees be any less impressive?

I spent my first few days settling in and exploring all corners of campus, identifying as many species as I could, and making note of particularly charismatic trees. I asked everyone I met if they had any favorites, and without fail, every single person mentioned the "Upside-down Tree," the weeping beech behind the Chapel. Although I am equally enamored with that wizened, magical specimen, I will save that tree for another essay; my loyalty rests elsewhere.

I found myself infatuated with a tree that is hidden on campus, but no less remarkable. On the corner of West Brooklyn and Ward streets, between Davis House



(anthropology) and Treleaven House (sociology), there is a jumbled patch of trees, all various species, sizes, and ages, and in the middle stands a tree that struck me as dignified, from her crown-like ring of basal branches to her glowing red fruits, and so from here on I will refer to her as the Queen. This tree has flowers that are alternately referred to in botany as perfect, bisexual or hermaphroditic; these terms are synonymous, so I will simply explain that perfect flowers contain both staminate and pistillate parts. Thus, my use of the nickname "Queen" and female pronouns is purely based on the vibes that I get from this tree, not based on any scientific data. It's her mood, her look, her overall persona.

Her leaves are huge — longer than my arm and wider than my head. One leaf that I plucked measured two and a half feet long (30 inches) and a foot wide. Each leaf is obovate, or oblanceolate if you're going to get nitpicky; broadest distal to the middle of the leaf. The upper surface of the leaves is a vibrant green, and the underside is whitish, soft and slightly hairy. The midrib is thick and pale green, and the veins emerge pinnately along it. The stipule is quite thick. Forgive me — I'm

> going to continue with a few more technical descriptors, but you'll soon learn why I'm going into so much detail. The leaves are simple and entire, yet they are clustered together toward the end of the stem, giving the illusion that they are leaflets in a palmately compound leaf, but don't be fooled: the axillary buds present at the base of each leaf help you to see that they are not. As a group, their arrangement forms a little dome, resembling an umbrella of leaves, thus the common name umbrella magnolia.

Here's where things get tricky. I am an amateur botanist; my training is in creative writing and my botanical tools are still in the process of being sharpened. I often rely on books, as well as crowd-sourced, community science tools, such as the app iNaturalist, which allows you to upload photos of flora and fauna seen in the wild, and once you enter the location data and photo, the AI technology allows you to compare and contrast your observation with photos that appear similar. Your selection can then be verified by other community scientists, including taxonomic experts. Using this tool, I surmised that this particular tree is an umbrella magnolia, *Magnolia tripetala L*.

Several days after my discovery, I spoke with David Heithaus '99, Kenyon's director of green initiatives. He agreed with my identification and mentioned to me that, as far as he is aware, this is the only tree of its kind on campus, technically, although there are a few other umbrella magnolias in the woodlot down the hill from the studio art building. He gave me verbal directions to Sunset Point, an overgrown trail with a few precarious stone steps that lead into a sloped forest. I explored this trail and found three or four trees that could possibly be juvenile or growth-stunted umbrella magnolias, none as grand as the magnolia on Brooklyn Street. Until I am proven wrong, I am going to celebrate my Queen as the only umbrella magnolia on campus proper.

However, a few factors give me pause to my confidence. First of all, after checking out every tree guide I could get my hands on from Chalmers Library, I read several conflicting accounts about magnolia species. In the "National Audubon Society Field Guide to North American Trees, Eastern Region," the umbrella magnolia (Magnolia tripetala) is described as having leaves ranging from a length of 10 to 20 inches, whereas the bigleaf magnolia, Magnolia macrophylla, is described as having leaves ranging from a length of 15 to 30 inches, found in many regions including Ohio, while the umbrella magnolia is most often found in southern states. In "A Natural History of Trees of Eastern and Central North America," a similar measurement is described of 18 to 20 inches long leaves for umbrella magnolia, in comparison to 20 to 30 inches for bigleaf magnolia. What gives? The tree on Brooklyn Street in Gambier has many leaves in the 20 to 30 inch range, and even a few that exceed 30 inches. To complicate the matter further, when I met with Andrew Mills, the current grounds manager at Kenyon, he and several of his coworkers insisted that the Queen must be a cucumber magnolia.

I went back to the intersection of Brooklyn and Ward to investigate, and I decided to take a casual survey of all the trees on the block, starting with the Queen, and radiating outward in a loose spiral. I am delighted to report that the copse of trees on that corner is surprisingly diverse: in a 15-foot radius, I found a larch, a sycamore, a mulberry, a hop hornbeam, a rhododendron, a black locust, a black cherry, a white pine, an oak, a fir, a red maple, an old field apple tree, a horse chestnut, a hemlock, a sawtooth oak, a catalpa, a viburnum and what appeared to be another magnolia tree. With a quick examination, I found that this other magnolia is more likely to be a cucumber tree, Magnolia acuminata. It has much smaller leaves, averaging about seven to 10 inches in length. So here is the cucumber magnolia that Andy Mills and his coworkers must have been thinking of, or maybe as a newcomer I simply described my locality wrong.

The mystery remains about the tree field guidebooks: is the Queen a bigleaf magnolia or an umbrella magnolia? I did some deeper digging into the morphological differences between the two species, and I found the possible answer to the question. Bigleaf magnolias have two rounded lobes at the base, like little earlobes. The fraser magnolia also has a heart-shaped or lobed leaf-base, but the umbrella magnolia does not. Not one of the Queen's leaves is lobed at the base. So, even though the Queen's leaves are 10 inches longer than the reported length of umbrella magnolia leaves described by all sources, I can at least rule out the cucumber, Fraser and bigleaf magnolias. The only other magnolia species that approximates this leaf length is the Ashe magnolia, *Magnolia ashei*, which is only found in Florida. *Continued on next page*



On the corner of West Brooklyn and Ward streets, between Davis House (anthropology) and Treleaven House (sociology), there is a jumbled patch of trees, all various species, sizes, and ages, and in the middle stands a tree that struck me as dignified, from her crown-like ring of basal branches to her glowing red fruits, and so from here on I will refer to her as the Queen. I have not yet described the fruits of the Queen, which are similarly notable and unique. In this season that I am writing this piece, in late August and early September, the fruits are still a pale pink, four to six inches in height, two to three inches in width. If you have not yet examined a magnolia fruit, you're in for a treat. They're conelike, but also alien-blob-like. They're fleshy and thick until they crack open to reveal bright red seeds that pop out from the fruit's carpels.

Keep an eye on the Queen's flowers in the spring, for the flower of any magnolia tree is a sight to behold: often, from species to species, they are cup or candle-like in appearance; white petals pointing skyward as if in prayer, and offering strong aromas to any passersby or pollinator. Since I have only just moved to Gambier, I missed the spring blooms of the Queen, and I will have to wait until next year to report back on the vision and scents of her blooms. Unfortunately, all of the guidebooks that I read describe her flowers as unpleasant or disagreeable. Donald Culross Peattie, author of the aforementioned "A Natural History of Trees", describes the umbrellatree as elusive, rare, beauty-dispensing, and unforgettable, but also in these magical terms. Keep in mind that this book was written in 1948:

As you tramp or motor beside the roaring streams of Great Smoky Mountains National Park in May, the Umbrellatree, with its big, creamy-white flowers, repeats itself over and over, until the forest — made up of the most magnificent hardwoods of the North American continent, seems populated by a troop of wood nymphs.

If you're not yet convinced that the Queen is a notable tree on campus, consider how neat magnolias are in general. Magnolias are an ancient group of plants. with a fossil record dating back 95 million years. Magnolias are often considered to be among the earliest known angiosperms, or flowering plants. The primary pollinators of magnolias are beetles, although other insects visit as well. The beetles and trees have a unique relationship that may indicate a concurrent, symbiotic evolution, or pollination syndrome: the flowers have lots of parts, that is, lots of petals, stamens and pistils, in comparison to other angiosperms, and beetles often feed on the stamens as part of their visit. Many species of magnolia produce floral heat and scent at night, which entices the beetles to spend the evening in their warm embrace, feeding on their anthers and spreading pollen onto their stigmas.

Perhaps what is most compelling about the Queen isn't her enormous leaves, her vivid red seeds, her beetle-pollinated stinky flowers, or that she is the only representative of her species on campus, but rather her community on the corner of Brooklyn and Ward. In my casual tree survey of campus, I have not yet encountered such a dense and species-rich grove of trees. Their arrangement almost seems accidental and chaotic they're all close together, and most of them are the only individuals of their species on the block. They appear to be in conversation with one another, as though the trees are having a slow, decades-long cocktail party. If you walk around campus with the intention of identifying tree species, you won't find the same type of chaos as at Brooklyn and Ward. In general, you will find trees to be spaced out evenly, and most trees will have companions of the same species nearby: oaks with oaks, maples with maples, and so on.

The historical record of trees at Kenyon is slim. Elizabeth Williams-Clymer, the special collections librarian, helped me track down a few odds and ends, including tree bulletins from 1910, 1912 and 1914. These bulletins were all published by the Ohio Agricultural Experiment Station as reports on forestry operations and woodland conditions. The 1910 bulletin describes the Kenyon forest, comprising about 200 acres, containing a "fine, virgin stand of oaks" as well as new plantings of walnuts, dogwood, hickory and red maple. The 1912 bulletin describes a planting event of "3,700 tulip poplar, 600 white ash, 100 bald cyprus, 1,750 white pine, 300 Norway pine, 1,080 Norway spruce, 200 Austrian pine, 1,500 red oak, 100 burr oak, 200 European sycamore, 175 American sycamore, 600 linden, 230 chestnut and 210 red mulberry." The 1914 bulletin makes a few updates, including a continued planting effort: "300 pines, 900 chestnuts, and 2100 red oaks," while "a mature stand of black and white oaks were removed". Sadly, I believe most, if not all, of those chestnuts are gone, due to a mass blight, Cryphonectria parasitica, which began in 1904 and ravaged the North American population of chestnuts.

It's difficult to know how many of the trees listed in these bulletins still remain, if any. Heithaus mentioned to me that a grand old white oak was recently cut down to make way for a parking lot.

Williams-Clymer also pointed me toward a 1983 tree survey, which is currently kept in the maintenance offices. Andy Mills loaned me the dense survey, which I spent several evenings attempting to decipher. The survey doesn't come with a map, only reference to tree tags, which of course are often missing, swallowed up in the tree bark or chewed on by squirrels. It is useful, however, to see the distribution of species, and to note that in 1983, there were at least 2,060 on campus. The most common tree species that year seem to be oak, maple, hickory, black walnut, pine, honey locust and arborvitae. Less common species, and therefore more thrilling to me, are catalpa, tulip poplar, larch, sassafras, ginkgo, mulberry, persimmon, tupelo and Kentucky coffee tree.

There are, sadly, many ash trees listed in the survey, while today, thanks to the nasty ash borer, there are only a few remaining. There are also many elms listed, the majority of which were likely destroyed by Dutch elm disease, although Heithaus says, "I'd be shocked if we didn't have some slippery elms or Chinese elms around. Knox County got hit pretty hard by Dutch elm."

Many of these trees have been cut down due to storm damage, disease or to make space for new construction. I spoke with several colleagues who are still mourning the loss of specific trees which were cut down for parking lots, the library, and the new dorms. Up until recently, Kenyon held a Tree Campus USA certification, which has lapsed due to many recent construction projects and cuttings. On a lighter note, I was happy to learn that all the deadwood, including branches and trimmings, are recycled into mulch that is used in the landscaping on campus and at the Kenyon Farm. So, in that sense, no tree is ever truly gone from campus. The trees also linger in local memory despite their absence; I have heard several colleagues and students refer to the missing trees as "ghost trees."

The 1983 survey has no mention of the Queen. I read through the entire survey twice, scanning for an umbrella magnolia, with no luck. The survey mentions a bigleaf magnolia, which I have not yet seen on campus, and many cucumber magnolias, which of course have smaller leaves, and I've found a few of these scattered around campus, particularly the glorious specimen between Finn House and the Kenyon Inn. Perhaps the Queen was planted after 1983, although her girth would suggest that she is older than 40 years of age.

After reading through all these old surveys and

records, I finally found the true font of tree knowledge: Steve Vaden, Kenyon's recently retired longtime grounds supervisor who kept a careful eye on all of the trees on or near campus for more than two decades. Vaden shared enough tree stories to fill a book; it is so often the case that these invaluable oral histories don't make their way into the institutional archive. Steve finally cleared up the Queen's background for me. Lewis Treleaven '41, who worked for the College in many positions and was named Gambier Citizen of the Year in 1989, planted many of the trees on the corner of Ward and Brooklyn when he occupied the house. He sold Treleaven House to Kenyon in 2002 and passed at the age of 89 in 2008, so, alas, I can't ask him about the Queen's origins. Vaden, however, seemed to know a lot about the Queen. He described how she might have been planted in the 1980s and has gone through some tough times since, including many hard frosts during which she "died back to the rootstock," explaining why she has multiple trunks in a ring formation surrounding what would have been the original stem.

Soon after I began to write this piece, I biked by the intersection to examine the Queen's leaves more closely, and as I approached, I was horrified to see three or four maintenance vehicles parked along Brooklyn Street. I saw that parts of the lawn adjacent to 'my tree' had been marked with colorful tags and wooden posts. Were they about to chop her down? I lingered for a few minutes to surreptitiously assess their project, and with relief, I realized that they were simply building a sidewalk parallel to the road. I hope that in all the new construction and expansion of Kenyon, this tree and all her tree companions on the corner of Brooklyn and Ward will be celebrated and spared. Please pay her a visit, write an ode, paint her portrait and spread the word of her glory across campus and beyond.



Historical Record

Researchers from the Ohio Agricultural Experiment Station returned to Kenyon's campus a number of times in the early 1900s, documenting the state of the College's forest and noting a "fine, virgin stand of oaks" as well as new plantings of walnuts, dogwood, hickory and red maple.

Stranger in an Unstrange Land

BY CLAIRE HAYNES '23, BFEC POST-BACCALAUREATE FELLOW

There is a term in the field of rural **sociology** that I learned in my first semester as a college student in Knox County. Though I didn't know it then, as a transplanted teenager in a sea of strangers, this expression, density of acquaintanceship, would come to shape my college experience. This term denotes the proportion of a community's residents who are acquainted with one another. The density is much higher in smaller communities than in cities, where anonymity is the norm. In other words, in a rural area like Knox County, your postman might be your neighbor, who also raises chickens and sells eggs to you, and has a kid with yours at school. At a small school like Kenyon, this might look like your Biology 100 classmate who is also president of your favorite club, who you see as you walk to lunch on Tuesdays, and occasionally volunteer with at the farm. These people, and the many others like them in small communities, are the repeated acquaintances who fill your world.

Sociologists remark on the unique ability of these small communities to control deviance, socialize young and care for their weaker members due to the strong bonds of acquaintanceship. As for psychosocial impact, the sociologists are less clear, but I'll let any new and current students reading this in on an open secret — the density of acquaintanceship at Kenyon is something that envelops us slowly, that we take for granted, that we use as fuel for gossip and occasionally despise, but once we have graduated, it is the thing that many of us sincerely miss the most.

When I learned the term as a firstyear, I considered it to be essentially human-centric. But I also understood. from my childhood spent playing along the cattail-lined, blue crab-abundant riverbanks behind my home, how acquaintanceship forms between all living things in the natural world. It works in much the same way as human acquaintanceship and community does - through time, care and necessity. It happens through a purposeful association of names and faces and through time spent in their company. And the result? We recognize our part in a more full world and our dependence upon it.

Most of us live in a world in which we have no practical use for identifying the vast majority of the plants and animals that surround us. I grew up in that world. And yet, as a child, I became an expert in the names of things by accident. I spent more spring, summer and fall days than I can count with friends but often alone, playing in the creeks at the end of my street, which emptied into a broad estuary. There I would dig for critters, avoid dive-bombing ospreys, make bracelets out of reeds and climb on the tall oyster deposits which were shucked and left by people who called the same land home centuries ago. The names of things and their histories were filed away into my brain, enriching my world and sense of belonging. I see a similar, natural curiosity in the kids who come to our environmental center. How many times have you heard a kid ask, "what is this?", then stick it in their mouth or up their nose, using all of their senses to discover something new about the world. I always find it to be a magical thing.

When I was a college student here, my understanding of the land on which I lived diminished drastically. Despite my discovery of writers and thinkers like the Kentuckian Wendell Berry, who gives us lines such as, "if you don't know where you are, you don't know who

Density of acquaintanceship is a beautiful thing. It holds people accountable for their actions and fosters love and care. I hope in the future, it can be equally spread to all living things.

you are," and my growing admiration for ideas of connection to place, I hadn't seemed to put those ideas into practice in my transitory home of Gambier. At that time, I could walk down Middle Path and maybe name two tree species, and if you asked me to conjure up their images in my mind, well, I probably couldn't recall a single one. For all my purported love of the outdoors, the density of acquaintanceship that I had with non-human things was low. And as a consequence, I didn't have all those wonderful relationships with different living things that sustained me as a child.

When I came back to work in this small town after my graduation from Kenyon, newly lacking in sentient-being acquaintances, I realized that I was more alone than I had thought I would be almost as alone as I had felt that first semester. How could this be? I had spent four years walking along these same paths — four years of seasons changing,

of animals birthed and dying, of trees creeping upward by the millimeter and being chopped down within the hour. I realized that my problem lay in the fact that my acquaintanceships began and ended with humans. My stake in the life and death of the non-human living things around me was hardly more than that of a stranger. After graduation, my world had emptied when humans were gone from it, and I realized that I needed one that would remain full no matter where I went or who had left.

My solution was to begin a field guide for BFEC trees. And so I have begun. The main problem I faced was my own general ignorance; there is a huge blank space in my knowledge of the world where knowing the names of trees should be. A general blob of green where distinct and complex ecosystems exist. Learning the names of plants and animals and their lifestyles wasn't deemed important enough in school. Despite the fact that the health of our bodies and planet rely on knowing these

UPCOMING PROGRAMS AND EVENTS

Family Nature Quest: Wild Weaving

SATURDAY, OCTOBER 7, 10:30 A.M. In our prairies, forests and riverbanks lie the materials we'll use to practice the ancient craft of weaving. Learn about the grasses, rushes and vines that are best for weaving and how to use them to make baskets, dolls or the craft of your imagination. *Meet at the picnic shelter*.

Guided Hike: Southern Trails

SATURDAY, OCTOBER 7, 2 P.M.

Meet at the BFEC Resource Center for a hike and a chat with BFEC staff on portions of our southern trail system. Terrain and distance to be determined, based on participant choice.

Fall Harvest Festival

SATURDAY, OCTOBER 14, NOON - 4 P.M.

This free family event includes hayrides, live music, food trucks, children's activities, farm animals, a campfire, a cider press, pumpkin decorating, an art exhibit by plein air painters and so much more.

Family Nature Quest: Cordage Construction

SATURDAY, OCTOBER 21, 10:30 A.M.

Some of the sturdiest cordage can be made from a pair of hands and some plants. In this program, we'll make cordage from bark, then test its strength through shelter building. *Meet at the picnic shelter*.

Guided Hike: Northern Trails

SATURDAY, OCTOBER 21, 2 P.M. Meet at the BFEC's Miller Observatory for a hike and a chat with BFEC staff on portions of our northern trail system. Terrain and distance to be determined, based on participant choice.

Guided Hike: Southern Trails

SATURDAY, NOVEMBER 4, 2 P.M. Meet at the BFEC Resource Center for a hike and a chat with BFEC staff on portions of our southern trail system. Terrain and distance to be determined, based on participant choice.

Himalayan Bowls and Chanting

SATURDAY, NOVEMBER 11, 10:30 A.M.

Allan Bazzoli M.D. will offer the sounds of 18 Himalayan singing bowls combined with harmonic chants from different cultures to immerse you in a relaxing, transcendent experience of vibration and sound. Bazzoli will chant a blend of Native American sounds, the OM chant (the universal chant), the dragon chant and the Snow Mountain chant. Cost: \$20 adults, \$10 students. Reserve your spot: schutte1@kenyon.edu.

Guided Hike: Northern Trails

SATURDAY, NOVEMBER 18, 2:00 P.M. Meet at the Miller Observatory for a hike and a chat with BFEC staff on portions of our northern trail system. Terrain and distance to be determined, based on participant choice.

Guided Hike: Southern Trails

SATURDAY, DECEMBER 2, 2 P.M. Meet at the BFEC Resource Center for a hike and a chat with BFEC staff on portions of our southern trail system. Terrain and distance to be determined, based on participant choice. things, it just isn't practical knowledge anymore, and as time passes, acquaintanceship with the natural world diminishes more and more. Fewer people care or have any reason to.

If there is one thing that I've gained from my growing density of acquaintanceship with living things, it has been feeling my smallness in the world in a comforting way, just as I do when I return home to my river. But as one would expect with any human acquaintanceship, I also feel a newfound grief for its destruction. Gone is the rubbernecking and distant interest of a stranger when a living, centuries-old tree is chopped down for construction, or as a species creeps closer to extinction. I care more now, and my life feels more full, but it hurts more as a consequence. Dealing with this kind of grief hasn't been easy, but the alternative — a superficial understanding of a world where humans are the most important thing — isn't what will sustain me, or our world. Density of acquaintanceship is a beautiful thing. It holds people accountable for their actions and fosters love and care. I hope in the future, it can be equally spread to all living things.



Guided Hike: Northern Trails

SATURDAY, DECEMBER 16, 2 P.M. Meet at the BFEC's Miller Observatory for a hike and a chat with BFEC staff on portions of our northern trail system. Terrain and distance to be determined, based on participant choice.

DONORS AND VOLUNTEERS

Kenyon provides financial support to the BFEC, but the center has been able to grow largely through the generosity of our donors and volunteers. We are indebted to the following individuals, groups and businesses for recent donations of time, materials and funding. If you would like to make a gift or volunteer for a project, please call the BFEC at 740-427-5050.

BENEFACTORS

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INDIVIDUALS

Paula Millin Madeleine C. Morgan

STUDENT

Suzanne Crow Wendy Fetters Juliette Moffroid

VOLUNTEERS

This past quarter, our dedicated volunteers removed invasive species, monitored our bluebird trail, prepared for elementary field trips, conducted a wildflower survey on the River Trail, pulled garlic mustard and so much more. Collectively, they volunteered hundreds and hundreds of hours. Thank you so much!

Unless otherwise indicated, volunteers are Kenyon students.

Al Ummah, youth group Darya Aminia Amy Ballard, community member Olivia Braun Lynne Bush AC Fleenor Miriam Dean-Otting, community Jim Featherstone, community member Sarah Goslee Reed, community member Joel Hunt, community member Amelia Kovach Chelsea Menke, Kenyon staff Brian Miller, community member Samuel Morris Bev Morse, community member Liz Navratil Evan Sassin Laurie Thompson, community member Charlotte Worth

Golden Season

Enjoy the autumnal splendor of the BFEC through weekly guided hikes — Saturdays, Oct. 7 – Nov. 16 (except Oct. 14) at 2 p.m. Staff will lead participants on hikes of the northern and southern trail systems.



Brown Family Environmental Center

Kenvon

kenyon.edu/bfec | 740-427-5050

OUR MISSION

The Brown Family Environmental Center exists to support the academic goals of Kenyon College, to provide opportunities for education and research, to engage Central Ohioans of all ages with nature, and to conserve the natural diversity of the Kokosing River valley.

OUR STAFF

Emma Coffman '22, Post-Baccalaureate Fellow, 2022-23 Claire Hayes '23, Post-Baccalaureate Fellow, 2023-24 Dave Heithaus '99, Director of Green Initiatives Jill Kerkhoff, Facilities Coordinator and Office Administrator Shane McGuire, Land Manager Naturalist Noelle Jordan, Manager



Help Us Grow

TO MAKE A GIFT, PLEASE FILL OUT THE INFORMATION BELOW, DETACH THE SHEET AND SEE MAILING INSTRUCTIONS.

There are many reasons to give, including the satisfaction of knowing you're a part of critical environmental education and conservation programs. Receive preferred access to workshops, a hard copy of our newsletters, and a discount on bird seed. Use the form below to send your contribution today.

name (first, middle, last)						
address						
city	state	zip/postal code	country			
phone	email ad	email address				
Your donation is tax de	ductible as allowed by	law. The Brown Family Env	ironmental Center			

at Kenyon College is a 501(c)(3) nonprofit organization.

Membership level:

∃Student \$20	🗆 Individual \$35	🗆 Family \$50
∃Friend \$100	🗆 Patron \$250	□Benefactor \$1000+

Amount enclosed: _

My check, payable to Kenyon College, is enclosed

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