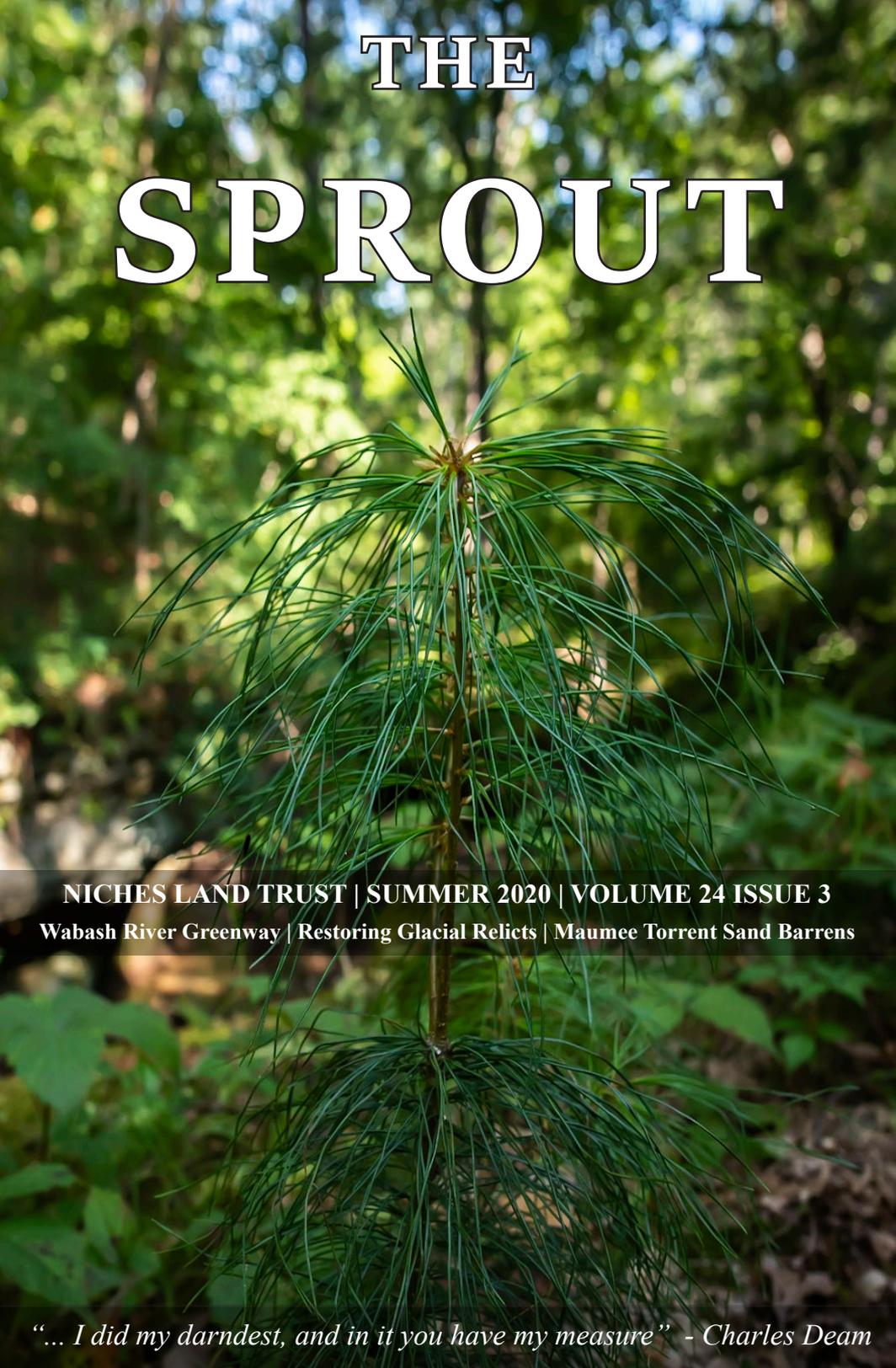


THE SPROUT

A young pine tree sapling with long, thin needles, growing in a forest setting. The background is a blurred forest with green foliage and tree trunks.

NICHES LAND TRUST | SUMMER 2020 | VOLUME 24 ISSUE 3

Wabash River Greenway | Restoring Glacial Relicts | Maumee Torrent Sand Barrens

“... I did my darndest, and in it you have my measure” - Charles Deam

Executive Director Update

Last month, I led a special 25th anniversary tour to a property NICHES helped to protect but is now owned by another conservation partner. The property is not currently open to the public, and is an exceptional example of wonderful natural Indiana, making our trip out there extra special for all of us.

I arrived 10 minutes early to the site. Soon after, a truck pulled in that belonged to the conservation partner/ property owner. I immediately realized I had forgotten to pass on to them that, in order to accommodate all in our tour group, we had changed the date from Friday to Thursday. I approached the staff getting out of the truck and explained who, what and why I was there. We had a pleasant conversation about the work they were intending to do that day, moved my car so they could do said work, and I waited for the participants to arrive and we then headed into the preserve to see the fresh blooms of the rare plants we were seeking.

Unremarkable in many ways, but I paused while out in the field and reflected on a phone call years ago I received at Clegg Memorial Garden, in which a man called to inform me there were three black people in the parking lot. I was taken by surprise, paused, and let him know that everyone was welcome on NICHES property. And, upon him realizing that his passive aggressive efforts to get someone else to call the police, or whatever his intention was, had no receptive audience, we parted ways.

I think about my experience the other day of not being perceived as a threat due to the color of my skin; the fear and threat that some feel by people of color using NICHES lands/ natural lands for a walk; and the well-publicized recent experience of Christian Cooper having the police called on him while bird watching in Central Park. I find it abhorrent that people of color still are not able to enjoy the experience of the natural world in the same way that I am, due to white people making people of color not feel welcome while walking, birding, botanizing or just breathing in nature.



In NICHES Vision for the Future we outline a world in which:

- Local communities are integrated into ecologically sustainable, aesthetically appealing landscapes offering many opportunities for enjoyment of natural areas and open spaces.
- Local communities have found ways to minimize negative human impacts on local ecological processes and take advantage of local environmental resources in a sustainable manner thereby improving the region's quality of life; and,
- Multiple and diverse stakeholders from local communities are engaged in protection, restoration, and stewardship of the landscape in an open and participatory manner.

By local communities, NICHES means everyone, including people of color. There is no litmus test for being involved in NICHES, and we pledge to do our part to examine ourselves and take down our own inadvertent hurdles for everyone to participate in our programs and on our lands, and to speak out when we see hurdles being placed by others in our region that inhibit anyone from spending and enjoying time in the natural world.

-NICHES Executive Director, Gus Nyberg

After a pause in our outreach work, NICHES has made the decision to restart hosting non-stewardship events on the land and waters to a limited degree. All events, stewardship or outreach, in July, August and September will require an RSVP and be limited to 12 or less people. This will allow us to be in a better position to social distance and do our part to both continue to limit the spread of Covid19 and also celebrate the natural world that we all love.

Coming out of stay at home orders may not be a linear process. Therefore, if the state or region is experiencing upticks in cases, we may choose to cancel events. NICHES calendar on our website, www.nicheslandtrust.org, is the place to find out what events are occurring, how to reserve your spot, and their current status. Please do your part at NICHES events, and all the time for the health of you and our neighbors/ country, by practicing social distancing and masking up when you are indoors or anytime you need to work in a way that prevents social distancing. We appreciate your help in keeping our staff and other event participants safe and healthy.

Wabash River Greenway

NICHES is excited to be moving a new property forward this year along the Wabash River. The landowners have been accepted in the Wetland Reserve Easement (WRE) program administered by Natural Resource Conservation Service (NRCS), and NICHES will be purchasing the remainder interest in the land, with primary support from Roy Whistler Foundation. NICHES ownership will begin after the crops have been harvested for the last time in the fall of 2020 and WRE enrollment is complete. Working with us to enhance our local greenspaces.

Marginal farmland, does not translate to marginal potential natural habitat. NICHES will be working with NRCS to restore the land, planting a mix of trees and herbaceous vegetation, similar to the work NICHES initiated in partnership with NRCS at Parker's Indian Creek Basin when the land was enrolled in WRE in 2007.



Great Blue Heron
By: Zachary Cody

NRCS acres enrolled in Floodplain Easement Programs (FEP) and WRE along Wabash River in Tippecanoe, Warren and Fountain County.

- Fountain – 21 easements, total of 1,744 acres.
- Tippecanoe – 7 easements, total of 772 acres.
- Warren – 13 easements, total of 993 acres.

As of May 20, 2020

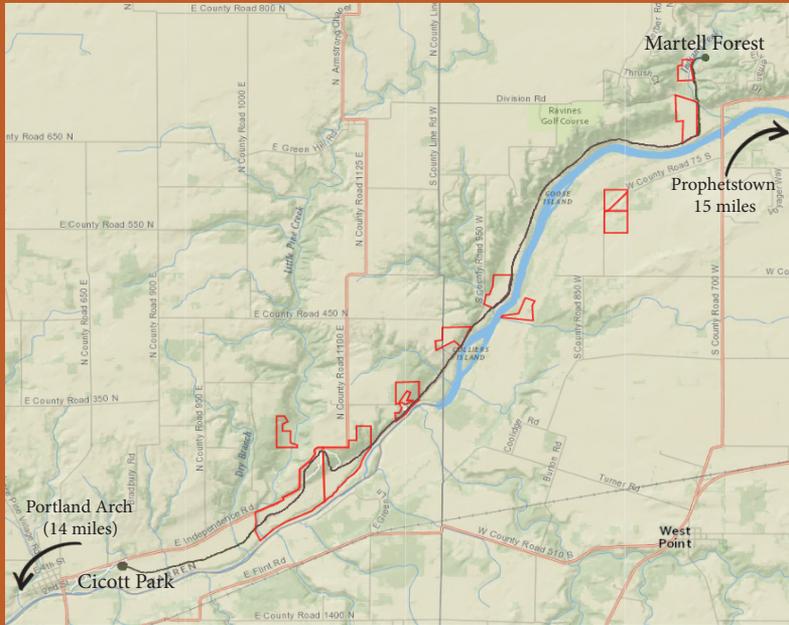
The WRE program, administered by the federal government, purchases easements that permanently retire marginal farmlands, such as the lands along Wabash River that flood regularly. The privately held and retired WRE lands combine with public, NICHES and other not-for-profits to form the core of the restored Wabash valley.

In addition to Parker's Indian Creek Basin, NICHS has initiated riparian restorations at Wabash Bottoms, Potawatomi Trail and Weiler Leopold. To date NICHS has retired and planted over 237 acres of floodplain at these sites, which in addition to creating vital habitat from corn fields, helps sequester carbon from the air, filters agricultural pollution, and significantly reduces soil erosion during floods of the Wabash River. From NICHS first purchase at Wabash Bottoms in 1997, the organization has been focused on acquiring and protecting land in the Wabash River Corridor to create an interconnected natural area stretching from Martell Forest through Cicott Park, and eventually beyond.

"Our community has a vision for a healthy and accessible Wabash River Greenway. Restoration and preservation of floodplain habitats is vital to enacting that vision. We are so fortunate to have NICHS actively leading this work and grateful for the opportunities made possible from the WRE program. Through these partnerships, we accomplish great things on behalf of the Wabash River!"

-Shannon Stanis
Wabash River Enhancement Corporation, Watershed Coordinator

The addition of these 89 acres will be NICHS 9th purchase in this stretch on river right, which leaves just 8 landowners in between creating an interconnected natural area stretching over 11 miles!



Weiler Leopold Preserve

Restoring Glacial Relicts

Unless you are a recent addition to NICHES membership, you know we have been researching and working on a regional restoration project with our local glacial remnant white pine populations for several years. I have poured over historical documents and carefully studied local populations with close attention to soils, companion plants, light conditions, and every factor related to white pine success over the past six years or so, and in 2017, started working with seed collected from our Crow's Grove preserve as the local populations produced a timely seed mast. Through research and then trial and error, I worked to produce trees from our local seed. I tested different stratification, substrates and containers, watering methods and over-wintering techniques, planting dates and inoculation with symbiotic fungal associates, all the while planning where the trees would be best placed to recover the local populations.



Aug 2017: Cones harvested from Warren County properties, dried, & seeds separated (875).



Dec 2017 - Apr 2018: Seeds stratified & sown using different experimental treatments. Germ rate between 23% - 50%



Apr - Sept 2018: Test plantings (in seed harvesting locations) to determine most effective planting techniques.

Just as I was beginning to take the 150 or so pine trees, started in April of 2018, out of dormant storage in my garage and planning how I would distribute the trees, I realized that it was time to have some discussions with the DNR about introducing white pine to one state dedicated nature preserve, Black Rock, and a few other key preserves which the state holds an easement over. I would need to convince several high-ranking DNR employees including the Director and Assistant Director of Nature Preserves, our state botanist, state ecologist, and regional ecologist, that our project had merit in order to be allowed to move forward. I attended a talk by our state botanist, Scott Namestnik, at the Celery Bog Nature Center and cornered him afterward for an impromptu meeting on the subject, after which he invited me to present to DNR officials about the project in Indianapolis. We set a date for the presentation and then the emerging Coronavirus forced us to transition to a Zoom presentation.

While under quarantine over the next few weeks I put together a detailed presentation on the history of the white pine in the eastern United States, with a focus on glacial remnants in Indiana and then went into specific details of populations recorded on NICHES preserves over the past 200 years and extant populations on our preserves. The presentation was a resounding success, and everyone agreed that what I had planned was an excellent regional project. I made an official proposal for exactly how I would implement the planting and received permission within two days.

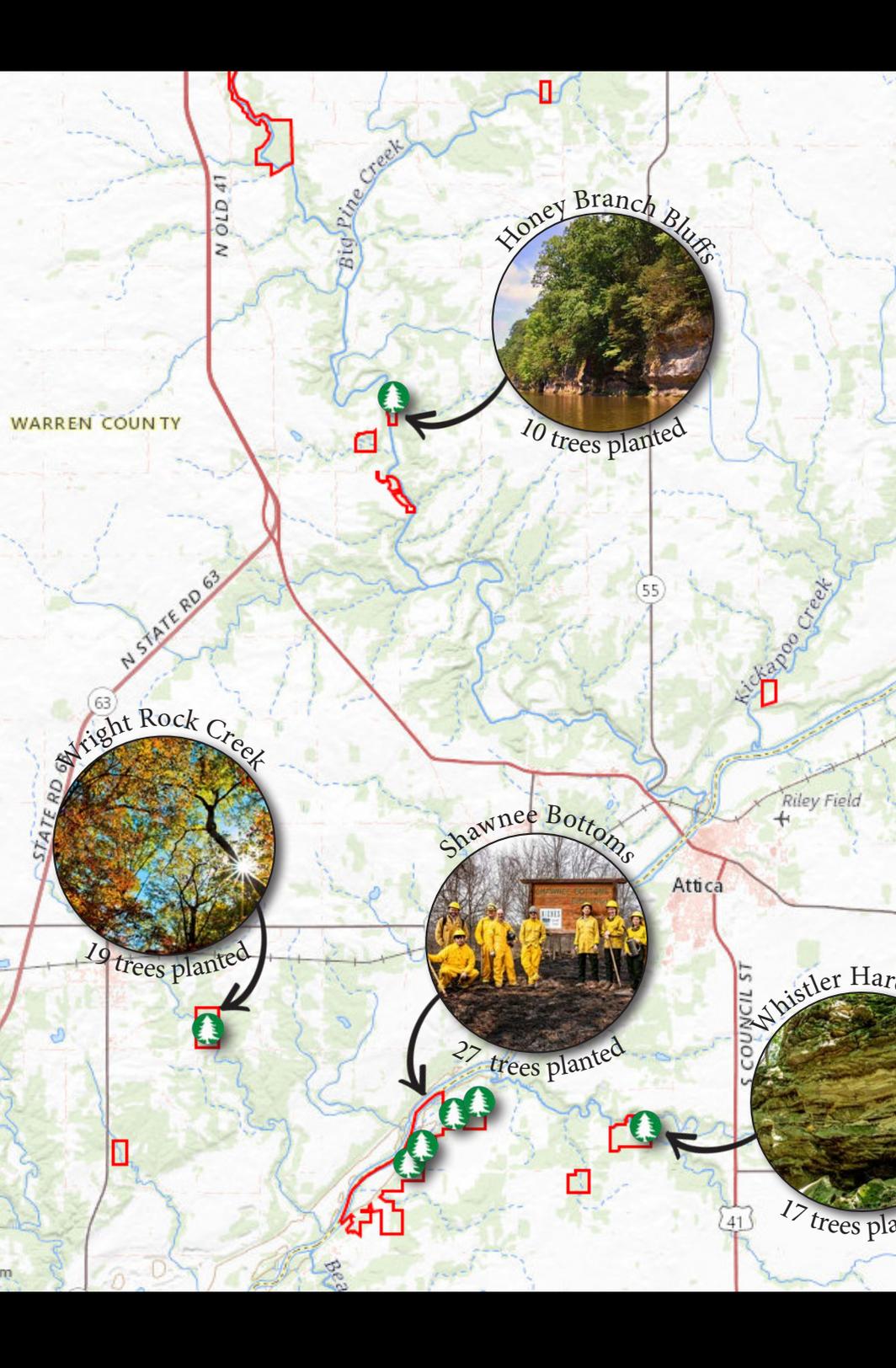
I immediately set to work preparing the trees, the planting locations, the caging materials and between April 20th-May 18th I planted out 137 white pine trees grown from seed to a total of eight NICHES preserves. I started in the Black Rock Barrens area with 16 trees at Black Rock, 14 at Potawatomi Trail, 16 trees to augment an extant location at Weiler-Leopold with only a single mother tree, and another 14 trees at Kohnkes' Little Pine, where we have a documented historical population. Trees were also introduced to sandstone bluffs at Shawnee Bottoms and Wright's Rock Creek and populations were augmented at Whistler-Hare Woods and Honey Branch Bluff. Each time I planted the trees I went to collect soil from the base of the mother trees at Crow's Grove to inoculate each planted tree with its mycorrhizal fungal symbiont, watered the trees in, and caged them to protect from browsing. The cool and moist spring was perfect for planting and nearly all the planted trees are doing well in their new homes. Some locations have received subsequent thinning to provide more light for establishment.

For the next phase of the project the DNR has offered to collect some seed from the oldest trees at Portland Arch and grow out more restoration material at the state tree nursery. Those trees will be used to further augment genetics at all locations and restore documented populations that have been destroyed.



Bob & Flora Easter





Honey Branch Bluffs



10 trees planted

Big Pine Creek

N OLD 41

WARREN COUNTY

N STATE RD 63

55

Kickapoo Creek

Riley Field

Attica

S COUNCIL ST

41

STATE RD 63

Wright Rock Creek



19 trees planted

Shawnee Bottoms



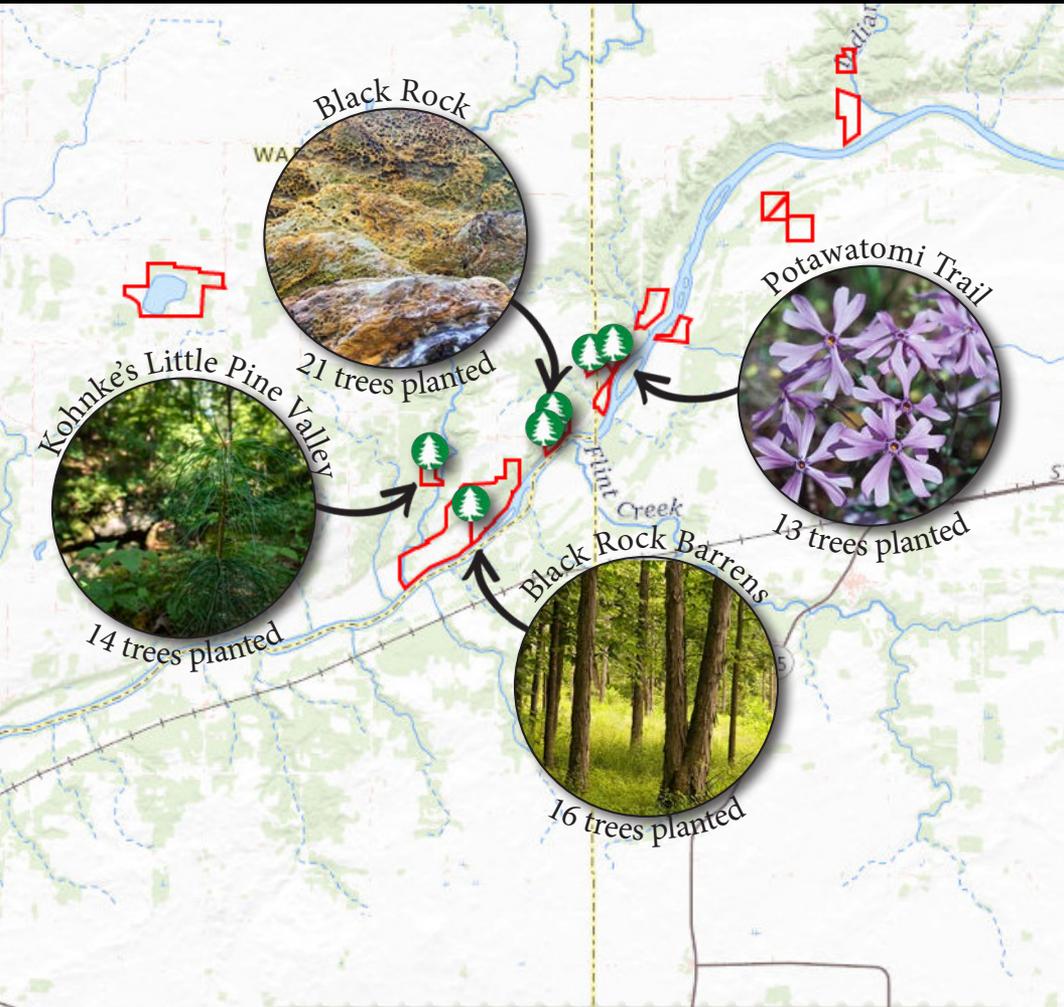
27 trees planted

Whistler Harp



17 trees planted

Beech Creek



Help us sustain and continue our work restoring the glacial relict white pines of Northwestern Indiana by adopting one of the 137 white pines planted this year!



White Pine Adoption Fee: \$250
(See remittance envelope for details)

Sand Barrens of the Maumee Torrent

14,000 years ago, as the glacial ice of the Erie Lobe retreated to the northeast, it left large debris deposits called moraines at its line of retreat. One of these, called the Fort Wayne Moraine, was left at present-day Fort Wayne, Indiana, where it acted as a dam holding back the waters that melted during the glaciers retreat (Figure 1). The lake's initial outlet was at present day Fort Wayne, Indiana, roughly 780 feet above sea level, or 210 feet above the current level of Lake Erie. Even at its highest point, the lake expelled water through this single outlet.

During this stage, the waters of the lake, possibly in response to a sudden westward advance of the ice front at the lake's eastern end, overtopped a "sag" in the Fort Wayne Moraine. This caused a rapid and catastrophic drainage of the lake known as the Maumee Torrent which scoured a one- to two-mile-wide channel running southwest. As the Maumee Torrent raced across Indiana, the water carved out a channel that we now call the Wabash River. The torrent carried with it a massive load of sediment, ranging from clay, to sand, to boulders. In areas where the current slowed down for whatever reason, the torrent dropped loads of sediment that could no longer be suspended in water. Today you can trace the history of the ancient Maumee flood in the form of sand deposits near the Wabash River.

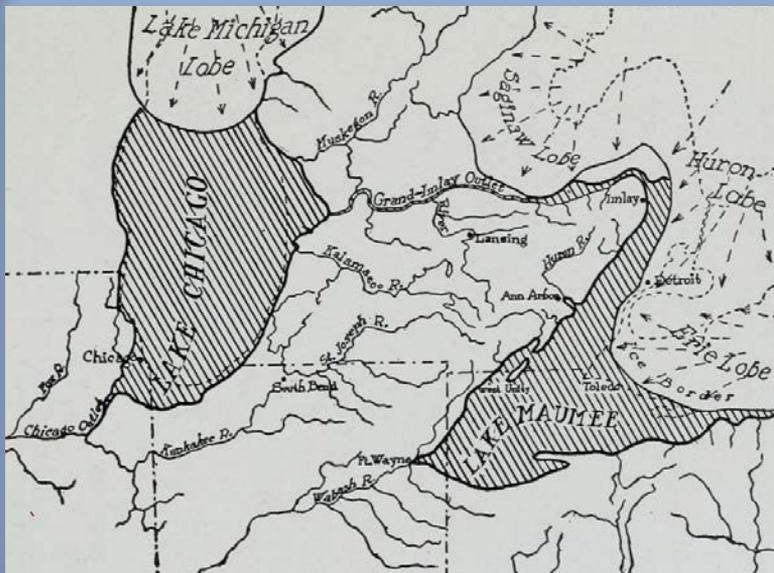
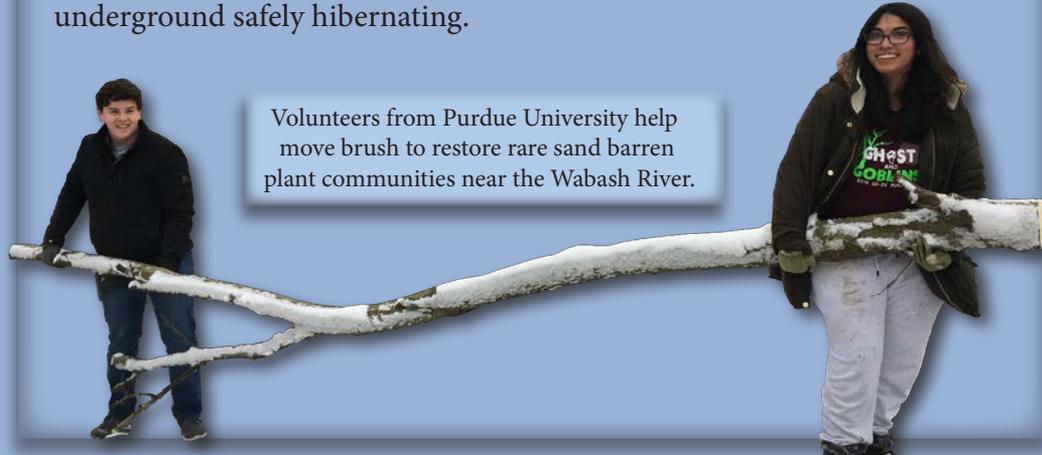


Figure 1. Lake Maumee was an early precursor to what is now Lake Erie. After the Ft. Wayne moraine gave way, the contents of the lake created the Wabash River. Before the rise of industrial agriculture Native Americans recounted the Wabash as being much deeper and clearer than it is today

7,000 to 9,000 years after the flood, Indiana experienced a period of drier climate which allowed plant species with traditionally more 'western' distributions to expand their habitat ranges eastward. During this time, plants like golden aster, Hill's thistle, and prickly pear cactus were able to colonize lands in Indiana. Eventually as the region returned to its wetter and temperate climate, mesic species from the east were competitively more fit and pushed those species out, but not everywhere. The high and dry sand barrens deposited from the Maumee Torrent along the Wabash River drained quickly and provided a refuge for some of the dry or xeric western species to cling on.

With the support of the Roy Whistler Foundation, NICHES initiated restoration of one of these rare sand barren communities at Roy Whistler Wildlife Area in the winter of 2019/2020. The lands on the south side of the road were already relatively open and functioned well for the rare species present on the site, however north of the road needed some heavy lifting to be rejuvenated. First, Arbor America put their forestry mower to use mowing down a dense thicket of mature bush honeysuckle. Next, a bucket truck was used to drop mature trees along the roadside and volunteers helped drag brush to a woodchipper, a neighbor helped spread the piles of chipped wood so they could decompose and re-distribute their nutrients more evenly. These were some of the last volunteer workdays where 'distancing' simply meant not putting your hand in the woodchipper. NICHES has since followed up and sprayed honeysuckle resprouts. The area that we are working to open up has shown a good response of species that we want to see thriving in the open barrens community. Due to COVID, we were not able to get all the trees on the ground and processed during the winter before the ornate box turtles emerged, pending a second wave of the virus we will aim to finish the work this late fall to continue the rejuvenation on site after the ornates are back underground safely hibernating.



Volunteers from Purdue University help move brush to restore rare sand barren plant communities near the Wabash River.

In 2019, Stuart Orr of The Nature Conservancy (TNC) visited known historic sites for the state endangered Hill's thistle (*Cirsium hillii*) throughout the prairie region of Indiana with the intent of finding a remnant population to help bolster the genetics of a declining population in Newton County. Of all the sites he visited, he was able to relocate only one, a historic Tippecanoe County cemetery, still bearing Hill's thistle. After the initial discovery, TNC and NICHES staff counted 120 rosettes, making this location the largest known population in Indiana. Conversations between TNC, NICHES, and Wabash Township eventually led to a management agreement between NICHES and Wabash Township that has NICHES mowing the front of the cemetery, and the back being left unmowed for the year to allow the Hill's thistle and associates to thrive. The initial 2020 goal is to allow the Hill's thistle an opportunity to flower and set seed, something they have likely not done for decades on this site (see below photo by Chad Phelps, 168 flowers were recorded this year!). In order to rejuvenate the few other Hill's thistle locations in the state, seed will be collected this year, and grown out to plugs in 2021. The DNR will determine the best places to add genetics and stabilize these dispersed remnant populations.

The historic Cemetery is a sanctuary where generations of Tippecanoe County residents have laid their loved ones down to rest. Many of the headstones bear the names of individuals who were essential in converting the forests and prairies of northern Indiana into bustling towns and productive farm fields. With this transformation of the land came an inevitable loss of natural areas that supported diverse populations of native plant species. Now cemetery prairies like this one, set aside from the shovels, scrapers, and plows of history, allow us to step back in time and enjoy the beauty of plant communities as they would have existed hundreds of years ago!

In addition to Hill's thistle, more than 40 native species have been identified on site, including the state endangered fringed puccoon (*Lithospermum incisum*). NICHES is working with Wabash Township to find a long term protection solution for these rare species and continues to honor those that are buried on site.



Fringed puccoon. Photo: Bob Easter



Hill's Thistle. Photo: Chad Phelps

Making up for Lost Time

In May, after the statewide stay at home order was lifted, we asked our friends, volunteers, and supporters to help us make up for lost time in our garlic mustard season. Over the course of two weeks, we were humbled to see over 100 volunteer shifts filled as well as dozens of reports from volunteers who found time to head out and pull on their own. With all the help, we were able to make significant progress this year on a number of key preserves and maintain the work of years past.



As the growing season marches on, we must now turn our attention to other invasive species and noxious weeds. If you haven't already, complete our online volunteer registration form ([@nicheslandtrust.org](https://www.nicheslandtrust.org)) to be notified directly about upcoming volunteer opportunities.

Join Our Community of Support

Thank You



For sponsoring our stewardship work and tree planting at Frank and Ada Beineke Memorial Forest!



Thank You



& the McAllister Foundation

For helping us secure the funding for a new 2020 Ford Ranger work truck!



Thank You



For sponsoring our stewardship work and tree planting at Potawatomi Trail!



“For over 150 years, Cargill has worked to be the leader in nourishing the world in a safe, responsible, and sustainable way. We are excited to continue to enrich our local community in North-Central Indiana through a partnership with NICHES Land Trust and their Annual Stewardship Program. We are excited to become part of the effort to most effectively utilize local lands as places of recreation and education of natural habitats that are truly native to our area.”



“We strongly believe that NICHES cause of restoring natural areas and waterways is crucial in providing our community an ongoing opportunity to experience Indiana outdoors in the most ornate form. We know that restoring land creates natural habitats for native wildlife and can help balance the ecosystem. Bob Rohrman Subaru will continue to support NICHES through Share The Love each year.”



You help us Thrive

2020 Goals Update (End of May)

250 new members at a special rate of \$25: 97 of 250

25 members giving at \$2,500 (or more): 19 of 25 committed

Campaign Goal: \$132,562 of \$250,000 raised

On June 14th NICHES celebrated its 25th birthday and our quarter century of conservation was capped off with a huge showing of support from the community! 6 minutes before midnight we reached our birthday fundraising goal of \$10,000.

Make a commitment to give \$25 a month or more and receive our new NICHES t-shirt!



Thank you to our Additional Sponsors!

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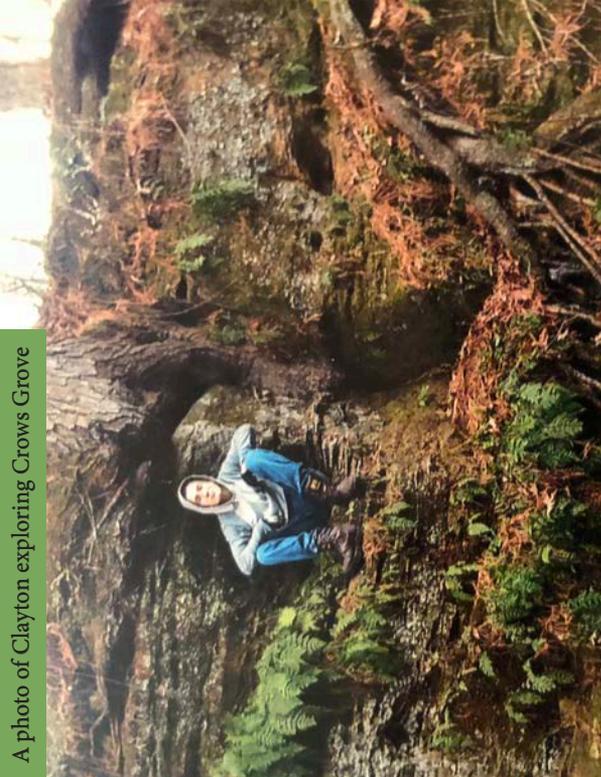
Apollos

GESWEIN
FARM & LAND

SA
SUBARU of INDIANA AUTOMOTIVE, INC.



A photo of Clayton exploring Crows Grove



NICHES remembers our friend and volunteer Mike

Murphy who passed away peacefully this April. In addition to being a part of our fire crew, helping maintain trails, and removing invasive species, Mike also worked with a young man named Clayton through Big Brothers

Big Sisters and helped connect him to the natural places we protect. Without a younger generation that understands the value of nature, the work we do has no foundation. The effect of Mike's advocacy for children and the environment will surly grow beyond the time he could spend with us in person.



www.nicheslandtrust.org
niches@nicheslandtrust.org

765-423-1605

