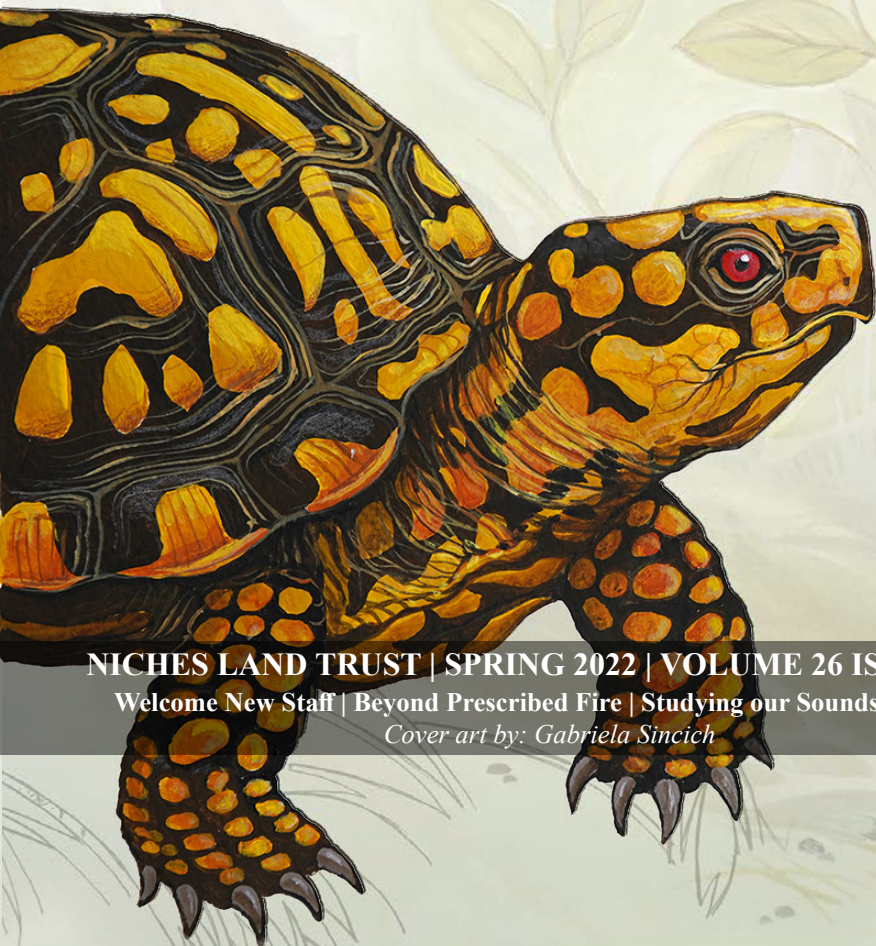


THE SPROUT



NICHES LAND TRUST | SPRING 2022 | VOLUME 26 ISSUE 2

Welcome New Staff | Beyond Prescribed Fire | Studying our Soundscapes

Cover art by: Gabriela Sincich

"Nature is slow, but sure; she works no faster than need be; she is the tortoise that wins the race by her perseverance." - Henry David Thoreau

Executive Director Update

Happy Summer Solstice, NICHES Land Trust members!

The last 5 months serving NICHES as our new Executive Director have been incredibly rewarding. It is truly an honor to serve this community. While I knew NICHES well before joining the staff, managing our day-to-day operations alongside long-term visions has exemplified that NICHES is a multifaceted organization with many ambitious projects and community partners. To call these last 5 months busy is an understatement. Your patience, understanding, support, enthusiasm, and generosity fill me with inspiration and breathe life into our mission each day.

In late April, over 60 NICHES members gathered to celebrate our accomplishments at our annual meeting. It was a pleasure to meet new friends and see familiar faces, share the strong state of our organization, and showcase volunteer and stewardship efforts. We hosted 3 hikes throughout the day, successfully elected our 4 new board members, and approved the addition of the finance committee as a standing committee in our bylaws. Thank you to all who attended in person and over zoom to make a business meeting a truly joyous occasion.



Left: Bob Easter presents a stewardship update to membership at our Annual Meeting.
Right: Deborah Kull is recognized as NICHES 2021 Volunteer of the Year.

NICHES became an accredited land trust in 2017 through The Land Trust Accreditation Commission. Accreditation is a voluntary process that demonstrates a land trust upholds the highest standards for governance, fiscal responsibility, sound transactions, and stewardship. Every 5 years, Land Trusts

must apply for re-accreditation. In the Fall of 2021, our previous office staff and dedicated board members submitted our application that details how NICHES has upheld the standards. The commission always sends an “Additional Information Request” (AIR) after application review to gather more details on specific projects unique to each agency so they can make an informed final decision. The commission reviewed and returned their AIR to us at the end of February 2022. Sandra, Bill Arthur (NICHES board president), and I have been leading the effort to complete the AIR over the last 3 months. This has been a significant effort on our part and a crash course in all things NICHES for Sandra and me. The re-application and AIR process strengthens our policies and programs and builds resiliency and sustainability as an organization. We are optimistic NICHES will remain accredited and will share the news when we hear from the commission later this year.

Thanks to the generosity of our members, NICHES supports 6 full-time staff positions. We bid farewell to 3 staff in 2021 as they moved onto new adventures. In my role as our new Executive Director, I was tasked to re-hire our Administrative and Development positions. I am pleased to share that now as you read this Sprout, we have refilled our full-time positions with enthusiastic and capable staff. We are excited to have Sandra Toruño Silva as our Administrative Manager and Silenze Esquivel Benjamin as our Development Coordinator. Please read their biographies in this edition of the Sprout and join me in welcoming them!

In previous years, NICHES hosted unpaid internship positions to support summer stewardship needs and provide training opportunities for the next generation of the workforce. For summer 2022, we have instead hired 3 paid seasonal stewards. This is a paramount step for NICHES to take as it allows us to hire candidates with more experience, provides financial stability alongside training and career-building opportunities, and supports equity in the workforce. Zach Neff is continuing to work with us full time for his 3rd summer season at NICHES. We enthusiastically welcome Jada Laycock and Reagan Muinzer to the summer crew! We have been extremely impressed by their field skills with plant identification and stewardship techniques. I thank you all so much for your financial support so that we can implement high quality stewardship of NICHES preserves with a full crew this summer.

I ask you all today to continue your generosity to NICHES as extra support in this momentous time. Please consider renewing your membership or making an extra donation, share your enthusiasm for this work and invite others to join the effort. NICHES is an incredible community, and we accomplish so much together.

-NICHES Executive Director, Shannon Stanis
shannon@nicheslandtrust.org

Welcome to NICHES Sandra

I render my heartfelt felicitations to all NICHES Land Trust Members! I have been graciously granted the opportunity to be the new Administrative Manager, a role that has long been in my plans and dreams. As I have gotten to know NICHES and all our friendly members, I have appreciated the gratitude you have shown. In return I would like to share a bit about my background and how I got to NICHES.

As an immigrant family, my parents held values we brought from Nicaragua. The importance of preservation and the history of the Americas, for example, were topics my father stressed from a very young age. He believed in educating us on our ancestors' struggles so that we knew not only where we came from but also what we value.

Those values led me to strive for the sake of our family. We believe in each other and support one another's dreams. This entrepreneurial spirit was ignited in me when I began to work as a front desk receptionist at our family tax and accounting firm. I saw a need for organization and leadership. Creating opportunity and a better future comes with dedication to detail and standards. In the last 10 years and in my role as Office Manager, I dedicated myself to continuously achieving and exceeding those standards. With that dedication came an incredible amount of growth for me and our business. So much growth, in fact, that we achieved our goals of owning the business property and renovating it completely to fit our needs. I am proud of the office I envisioned, planned, and designed, both aesthetically and functionally.

The most rewarding part of this enterprise was serving my community. Giving the people that look like me or live in my community a place where they could come with all financial grievances. That I could find resources and understanding is what I appreciated the most.

Now at NICHES I find that same type of fulfillment—in fact more so because I know what we do is not only helping Indiana's ecosystems survive, but also giving me hope for a brighter future for all. My son, Adan Isaac, is a considerate 5-year-old who worries about our planet. NICHES has certainly calmed us both.

Words cannot express the gratitude I have for the NICHES founders, the laborious hours spent by our incredible stewards and volunteers, and the gifts shared by our members. I feel invigorated by all of you and dedicate my work to you and our future generations. Working together, we will meet our mission of 8,000 protected acres by 2030.

-NICHES Administrative Manager,

Sandra Toruño-Silva

sandra@nicheslandtrust.org



Welcome to *NICHES Silenze*

Growing up in Costa Rica amidst tropical jungles, I developed a curiosity and love for the natural world. My enjoyment of the natural world and my fierce dedication to conservation and restoration took root during my childhood. My father, a passionate horse trainer and multitalented individual, raised me and my sister on a farm. He taught me how to live a minimalistic and conscientious lifestyle concerning the land. My mother met my father via the Peace Corps and dedicated herself to a life of supporting farmers and their incorporation of sustainable practices as an extension educator. Her inquisitive nature, curiosity, and delight in the natural beauty of Costa Rica—particularly birds—fostered my appreciation and deeply held values for conservation and restoration. Under my parents' guidance I aided in restoring a food forest on my father's cattle ranch and, as time passed, witnessed the return of animal species not seen in 40-50 years.

As a wide-eyed and deaf/hard-of-hearing youth, I drank in the sights of the trees and animals returning. Feeling rooted in my passion, I branched out to Indiana for high school and college to advance my education. In high school, I became the ECO Club president and helped implement projects such as ECO Awareness Week, a compost for food waste, and a garden. On days when I felt frustrated with humans, I found solace and renewed inspiration in local natural spaces, including those managed by NICHES. To show gratitude, I was able to raise \$1000 for NICHES at my high school graduation party.

Soon after a gap year of mycology lab experience, volunteering in Southeast Asia, and thru-hiking the Arizona Trail, I began my academic journey at Purdue University in 2017. Pursuing my bachelor's degree in Natural Resources and Environmental Science and a Soil Science minor, I developed an interdisciplinary toolset to approach environmental challenges. While juggling lab experiences, I found joy in using my teaching assistantship experiences from the Leadership for Social Change course to engage with people on environmental issues and mobilize them towards meaningful action. I've dedicated myself to building connections with community members via the Purdue Student Sustainability Council, being an NRES Ambassador, a SKY yoga and meditation member, and an independent environmental advocate. After graduating in 2021, as the NRES Commencement Student of my class, I am ecstatic to be a part of NICHES as a Development Coordinator and give back to the community and natural landscapes that supported me in my growth and development.



**-NICHES Development Coordinator,
Silenze Esquivel Benjamin
silenze@nicheslandtrust.org**

Meet our Summer Stewards!



I first found my love of nature as a child exploring the woods behind my family's home, and it has only grown from there! I graduated from Purdue University with a bachelor's degree in Wildlife in May 2022. While in college I've had the opportunity to work with the Indiana DNR and Purdue's Forestry and Natural Resources Program. Through these experiences, I've learned how to implement ecosystem management practices in a variety of habitats across the state. I am eager to build on these skills while working with NICHES this summer to protect and restore local preserves. I am also excited to continue growing my knowledge of native plants and gaining more experience communicating with the public through outreach events and Summer Camp!

- Jada Laycock

I first became involved with NICHES as a student volunteer after discovering some of the incredible preserves the organization protects. In December 2020 I graduated from Purdue University with a major in Wildlife and a minor in Forest Ecosystems. After receiving my Associate Wildlife Biologist certification, I began my career journey working seasonal positions with the Hardwood Ecosystem Experiment, Prophetstown State Park, and Western EcoSystems Technology. Getting to know and work with other local conservation organizations has deepened my understanding and appreciation for the work that NICHES does. Working for this organization is truly a dream come true, and I cannot wait to improve and protect our local natural areas with fellow stewards this summer!

- Reagan Muinzer



Returning to NICHES

In April, I visited a NICHES property for the first time since interning in the summer of 2020. My partner and I signed up for a volunteer shift at the Weiler-Leopold Reserve to assist in the organization's annual garlic mustard removal effort. I felt a certain calmness to be working in a landscape that I frequented as an intern and to have lunch at Black Rock on the same outlook where the NICHES summer campers ate. As we drove by the Beineke property where I had worked many weeks removing honeysuckle and stiltgrass, I saw an open, breathable wooded area that was once almost too thick with honeysuckle to navigate. Land stewards and volunteers had continued work in this area after we started heavy clearing -in 2020, and it felt like an impossible fast forward to see a recovering ecosystem after an almost two year absence.

Throughout the day, I visited properties where I invested hours of work, reconnected with friends, and showed my partner the things that made my internship a keystone experience. What I learned about plant ID, conservation, regional ecosystems, environmental education, and working with passion continues to resurface in my life. It appears in my relationship with my local community, my current job as an organic farmer, my perspective of what committed land stewardship should accomplish, and the stories I tell people. As a creative writer, it inspired passionate work where I wrote places like Crow's Grove, Shawnee Bottoms, and Clegg Memorial Garden into fictional and nonfictional stories, mixing and matching NICHES moments to preserve and reimagine pieces of the natural world. In the moments of doing, writing about, and reflecting on this work, these themes of preserving and reimagining reappear. Having a mission and vision bigger than ourselves gives us joy. They are what keep me—and many of us—returning to NICHES and the people and places that keep it alive.

- NICHES 2020 Summer Steward, Catherine Fisher





Broadhead skink sunning at Shawnee Bottoms. *Photograph by: Zac Cody*



Beyond Prescribed Fire

NICHES Land Trust is committed to managing our natural areas with an integrated approach that addresses the health of the overall ecosystem. In the face of climate change and impending functional extinction of many species of our prairie, savanna, barrens, and open canopy oak woodlands, one of the most important aspects of that integrated approach is prescribed fire. Our natural areas were forged in fire by the native peoples of North America over millennia. European settlers perpetuated fire, intentionally at times and often accidentally, well into the mid-late 19th Century. By the early 20th Century nearly all landscape-level wildfires in the Midwest Tallgrass Prairie had ceased due to fragmentation, widespread conversion of the landscape to agriculture, and governmental fire suppression policies. As wildfires slowed in the late 19th Century, many areas with adequate rainfall quickly converted to woodland from the well-developed underground stems of repeatedly top-killed trees, known as “grubs.” Some of our oldest open grown oaks date back to a time when they were surrounded by savanna species in that ecologically rich transition between prairie and woodland along the stream valleys. A staggering 99.9% of original prairie in Indiana has been lost to agriculture, development, and conversion to woodland in the absence of fire. NICHES is working to re-establish fire as a dynamic process on our preserves, which account for only a tiny fraction of the landscape, in the hopes that our example will lead others to embrace holistic management of natural areas with fire as a component.

NICHES has conducted 112 prescribed fires between spring of 2014 and spring of 2022, covering a combined 3,818 acres. We added 10 burns to the list between November 4th 2021 and March 17th of 2022. While planning, preparing, and safely conducting those prescribed fires is an accomplishment, it is only part of the picture. Prescribed fire can only do so much on its own. A myriad of studies being published on oak woodland management clearly show that biodiversity can skyrocket if fire is paired with understory, midstory and canopy thinning to get more light to the herbaceous layer. Of course, in the modern landscape we also must contend with an increasing suite of invasive species introduced from all corners of the globe. The good news is that fire can be a valuable tool in helping to control invasive species, and seizing that opportunity is a priority in our program. Fire alone will not control invasives species, but it does have the power to top-kill invasive vegetation like multiflora rose, making it much easier to control the rose while protecting the surrounding native species.

Often there is an opportunity after a dormant season fire to use broadleaf specific herbicide to spray resprouts of rose in mid-April when the plants have healthy resprouts that are 6-12" or so in height. This approach preserves native species, reduces volume of herbicide used significantly, and reduces the amount of time spent per acre as well as time spent walking back to refill a backpack. All of this adds up and allows us to be more impactful with the time and resources that we have available.

Top-killing invasive species is not the only way that fire can help with invasive control. In the case of species like Lespedeza and sweet clover, fire can cause a flush of germination from the seed bank and provide an opportunity to follow up the burn with herbicide treatment. With the surrounding thatch removed, it is easier to see all the plants and more complete control can be achieved.

In the case of preserves with low presence of invasive species, it is the highest priority to couple fire with thinning trees to open up light to the herbaceous layer to support native species diversity. With a fire return interval established, invasives reduced to a manageable level, and basal area reduction, we expect to see great increases in species diversity and eventually in expanded oak and white pine regeneration.

Success in prescribed fire is not just about the number of burns or the tally of acres. Success is using fire as a tool to help heal the ecosystem as part of an integrated management plan.

-NICHES Stewardship Director, Bob Easter
rlaster@nicheslandtrust.org



Hunter Potluck at Cicott Park

In early April, NICHES hosted its first annual hunter potluck at Cicott Park with our deer cull volunteer crews. Despite the cold, rain, and wind we had a great turnout with over 40 attendees representing all corners of our service range. The purpose of the event was to discuss last year's deer cull results, upcoming changes to the program, and volunteer opportunities for the year. It was also a unique opportunity for different crews to get to know each other and share in the comradery of NICHES' mission.

One of the biggest topics of discussion was reflection on where the program started and where it is headed. Beginning in 2010, with only one property and a handful of hunters, NICHES has been able to expand our hunting program to 35 properties and engage over 130 hunters.

In addition to helping our organization maintain healthy white-tailed deer populations, our hunting crews also function as site stewards for the preserves they are assigned to. In 2021, hunting crews provided over 1,000 hours of additional stewardship assistance outside of the hunting season. This dedicated force of volunteers allows us to have eyes, ears, and hands ready to work across our entire 5,575 square mile service range.

As the program continues to grow and evolve, we are committed to increasing the level of hunter engagement through continued guidance and communication. We will also begin working with our deer cull volunteers this fall to collect biological data from harvested deer to better assess the health and herd size of local deer populations.

-NICHES Land Steward, Justin Harmeson
justin@nicheslandtrust.org



NICHES deer cull volunteers gather at Cicott Park in Warren County.

Studying our Soundscapes

In 2009 NICHES Board of Directors created a 20-year strategic plan to guide the organization's growth, values, and operations. One important element of the plan is the facilitation of ecological research on our properties to better understand local ecosystem functioning and human interactions with the environment. Currently NICHES is a collaborative partner in 7 separate research projects ranging from tick surveillance to studying the effects of landscape use on stream health.

On April 18th, NICHES entered an exciting research partnership with Purdue's Center for Global Soundscapes aimed at better understanding biodiversity dynamics such as plant and acoustic phenology. The NASA-funded project will utilize International Space Station sensors, airborne drones, and passive acoustic recorders to record acoustic and spatial data at different temporal resolutions for two years. The NICHES properties involved in this project are Black Rock, Clegg Memorial Garden, Weiler-Leopold, Frogs Glory, and Granville Sand Barrens. These sensors will remain in fixed locations and autonomously record the sounds of wildlife so researchers can understand daily and seasonal wildlife vocalization patterns over the course of two years. To supplement this acoustic data, drone and satellite imagery will be used to create 3D maps of elevation and vegetation structure.

Benefits to NICHES for participating in this project, besides meeting the ecological research goals laid out in our strategic plan, include access to ultra-high resolution landscape imagery. Other associated project sites across the globe include the highland steppe of Mongolia, the mangroves of Bangladesh, and the Miombo Woodlands of Tanzania. NICHES is excited to participate in the study of the natural and man-made sounds that define our ecosystems, and to learn what changes in those soundscapes can tell us about the health of our landscapes and native species.

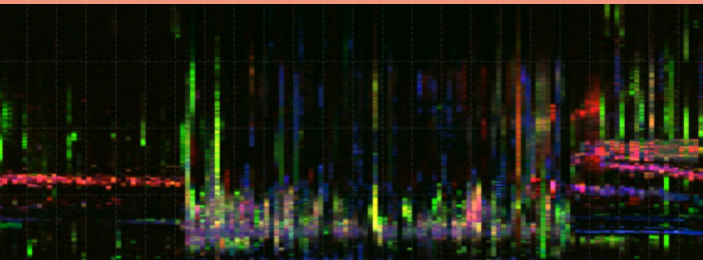


Figure 1: False color spectrogram of a full-day soundscape. horizontal red lines represent cricket calls, vertical green lines are from katydid calls, and the colorful splashes are bird songs.

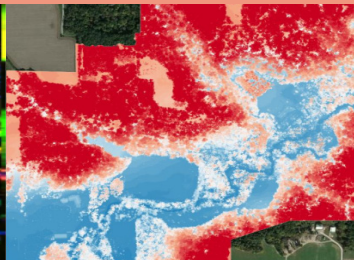


Figure 2: Digital Elevation Model of Martell Forest.

Garlic Mustard Season Recap

Between April 8th and May 22nd, volunteers rallied across our service range to assist in our annual push to remove invasive garlic mustard plants. We are excited to announce that this year's effort received the most support to date in the program's history, with over 370 volunteer shifts being filled. For the first time ever, the majority of preserves that received volunteer help were left virtually garlic mustard free! Compared to the truckloads of plants that were removed in years past, this year everything left the properties in repurposed bird seed bags. After running out of plants to pull at many sites, we were able to refocus our efforts on removing other target species like common mullein and honeysuckle. Getting ahead of this noxious invader puts our organization in a great position to support some of the healthiest populations of native spring ephemeral wildflowers in the state. Thank you volunteers for all the time, help, stories, and conversations shared this year. We are looking forward to working with everyone again next spring and continuing to build on this sustained and collaborative effort!

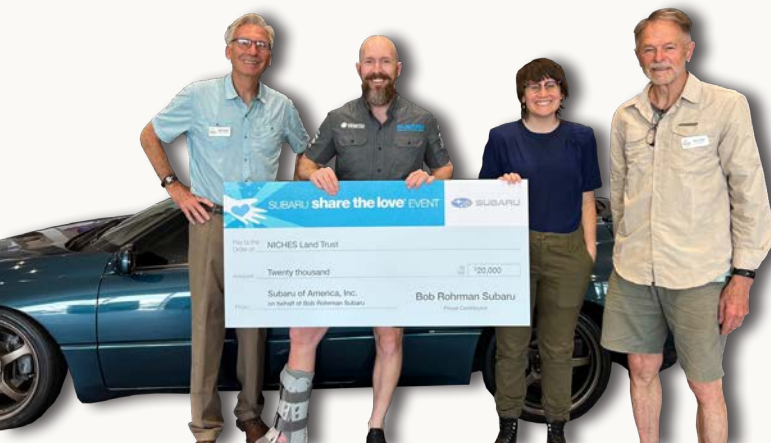
-NICHES Volunteer Coordinator, Sam Cody
sam@nicheslandtrust.org



2022 NICHES garlic mustard volunteers in action!

Thanks for all the Love!

We want to extend a heartfelt thanks to Bob Rohrman Subaru for sharing the love with a \$20,000 contribution from their 2021-2022 fundraising event! In addition to this financial contribution, Bob Rohrman Subaru has provided many helping hands in the field through multiple corporate volunteer workdays. Projects have included removing invasive species at Granville Sand Barrens and building an extension to the trail system at Parker's Hickory Grove Farm.



Thank You to our Additional Sponsors!



Driggs &
Associates



For more information on sponsorships, contact us at niches@nicheslandtrust.org or 765-423-1605.

We would like to recognize our recently departed friends who have included NICHES Land Trust as a beneficiary in their estate plan or memorial contributions. Thank you for all the support in achieving a shared conservation vision for the future.

- Bill Baugh
- Ernie & Anne Johannes
- Thomas Johnson
- Dorothy Jones
- Jeff Katz
- Nelma Lanie
- Nancy Litzenberger (former NICHES board member)
- Jeff Luce
- Jim Peterson
- Michael Schmitt
- Junior Sizemore
- Yue Lin Tong
- Ted Ulrich
- James Vacendak
- Linda Vanderkolk



www.nicheslandtrust.org

niches@nicheslandtrust.org

765-423-1605

1782 N 400 E, Lafayette IN 47905

