



17th ANNUAL CONFERENCE

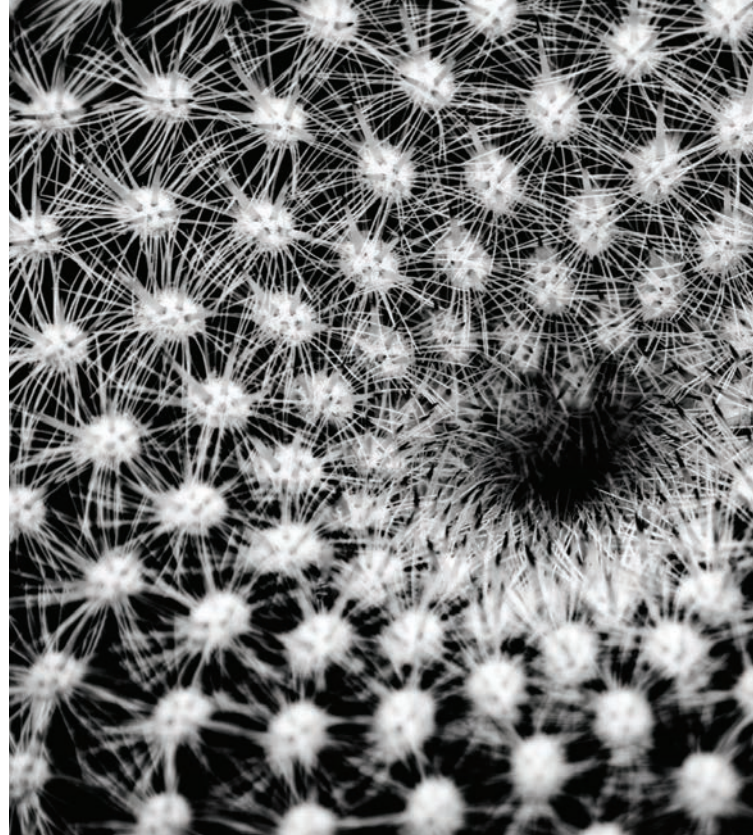
January 29th – 30th, 2024



STEWARDSHIPNETWORK.ORG

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WELCOME TO THE STEWARDSHIP NETWORK CONFERENCE

Welcome to The Stewardship Network Conference 2024! We are so pleased to be back in person with you for this, our 17th year of the event, and we thank you sincerely for generously making the space in your minds, your workloads, and your calendars to attend.

In choosing to be here with us, you've surrounded yourself with an amazing mix of nature's caretakers from all over the Great Lakes region and indeed, from across North America. Each of you here today brings an irreplaceable perspective to the table with your own unique experiences, skills, and knowledge. Your presence is what makes this conference such a dynamic and exciting place for new ideas, campaigns, and partnerships and we can already feel the collaborative energy in the air!

As always, TSN Conference is a space to engage, inspire, and grow. Over the next couple of days, we invite you to learn about something completely new, to ask difficult questions and hear sometimes challenging answers. Step out of your comfort zone and engage respectfully with someone who holds a strongly differing viewpoint. Share your setbacks, your challenges, your recent successes, and your long-term dreams.

All year long, The Stewardship Network exists to make all your incredible work as impactful, efficient, and joyful as possible. Wherever you are on your conservation and stewardship journey, we're here to help with our Job Board, Events Calendar, Monthly Webcast, TSN Spring Challenge, Gloves for Good, and more. TSN Conference, though, is a moment we truly savor. Our mission remains to connect, equip, and mobilize people and organizations to care for land and water in their communities and when it comes to connection, nothing tops this moment.

So enjoy, friends, and welcome once again! Let's build community and capacity around our shared goals and values so that we may all move forward in health and wisdom, inspired and united.

Lisa Brush



CEO & Founder, The Stewardship Network





Our History | Through her years of stewardship and community work, Lisa Brush noticed that many professionals in these fields were working with their “heads down.” They were putting in the effort, but their impact was limited by a lack of connection with potential collaborators. Her realization led to the creation of the Huron River Watershed Volunteer Stewardship Network in 1998. What began then as small collective of influencers, activists, and environmentalists laid the foundation for the creation of The Stewardship Network in 2004 to increase collaboration between communities caring for local ecosystems.

Grassroots local efforts, partnerships, and stakeholder involvement in program design blossomed into our flagship program and the heart of our organization, TSN Member Communities. Rooted in an ethic of cooperative ecological responsiveness, these diverse collectives have real impact, working together to protect the land and water where they live and sharing the lessons of their efforts across boundaries like never before. Now twenty years in practice, the TSN model has had proven successes in a wide variety of communities and geographies. Our robust and individually-customized support systems empower TSN Member Communities to spend less time behind a desk and more time in the field doing whatever collaborative stewardship activities their local ecosystems need.

Our Mission | We exist to connect, equip, and mobilize people and organizations to care for land and water in their communities.



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Natural Community Services (NCS) is an ecological services firm, specializing in wildlife habitat assessment, native landscape design-build, restoration contracts, green infrastructure, invasive species management, bioengineered erosion control, and sustainable site maintenance.

Landscape Design Requires Client Engagement

Native landscape and public greenspace design is dictated by client and owner uses, artful views, biologically functional and accessible goals—and NCS listens! Planning and design processes include client interactive concepts, GIS-based survey, site inventory and analysis, nature and landscape feasibility study, site plan and section design, cost estimates, and QA/QC.

Ecological Restoration Demands Experts

Why? Because it takes Mother Nature eons to create an ecosystem! If you want to recreate or restore one in just a couple of years, you need specialized expertise, training and experience—to protect the land and your investment. That's why ecological monitoring, design, and contracting is different from traditional forestry, engineering, and landscaping. The goals, materials and the process are different - contractors even agree, and partner with us for our expertise.

Benefits of Natural Community Services

Our educated and certified Restoration Practitioners, Biologists and Landscape Designers have the skills and knowledge, and continuously develop new restoration techniques to fit site and client specifications. NCS operates with land ethics – truly evaluated, sequenced ecosystem plans with respect for life's interactions, molded into “best management practices” - their natural, stable states. So what does this mean to you? Success. On budget, on schedule, with low to no risk because it's based on the science of ecology. The difference in restoring land with the selected native plant community in calculated harmony with the original organisms and surface features – not just a “BMP” spec or flower, NCS cares for wildlife habitat!



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COLLABORATIVE STEWARDSHIP

Headquartered in Ann Arbor, MI, The Stewardship Network (TSN) is an award-winning 501(c)(3) nonprofit organization with a 20-year history of caring for our natural world. Through shared experiences, knowledge, and resources, we continue to build an ever larger and more impactful network of place-based collectives (TSN Member Communities) from the Great Lakes to the Pacific Ocean doing the most important work of our lifetimes.

Think of The Stewardship Network as the broad trunk of a tree, sustaining an expanding canopy of flowering branches. While we're removing administrative hurdles and supporting Member Communities with vital, right-sized, centralized services, they're out in the field pouring thousands of annual volunteer hours into our ecosystems. The "branches" then return their hard-won lessons and best practices to us so we can disseminate them to all. It's a model suited to the scale of modern challenges and we're just getting started.

CONNECT | While the hard-earned wisdom we've gathered from decades of collaboration is leveraged all year long in service of our TSN Member Communities, we chose long ago to dedicate a meaningful portion of our energies to sharing it with the widest audience possible. The Stewardship Network Conference is our grandest manifestation of that choice and we're delighted to have you here!

EQUIP | We provide backbone support and technology systems to TSN Member Communities across the nation. Our approach builds inclusivity and diversity into land stewardship efforts and we fully embrace the unique supporting role we play in sparking change through these team efforts.

MOBILIZE | Through our Member Communities Program, we make collaborative ecological stewardship accessible to everyone, empowering stewards from all walks of life and experience levels to care for our environment together. The work we do with and through our TSN Member Communities is the heart of our organization and is absolutely vital to humanity's shared future.

CONFERENCE AGENDA - The Stewardship Network Conference 2024

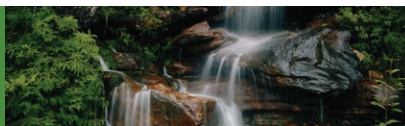
Monday, January 29, 2024		
8:00-8:30 AM	Registration , Centennial Room Breakfast , Big Ten Room	
8:30-8:45 AM	Welcome , Big Ten Room Lisa Brush, The Stewardship Network	
8:45-10:00 AM	Keynote Presentation: Reciprocity through Flames: Restoring Relationships and Beneficial Fire to Great Lakes Forests, Big Ten Room Evan Larson, University of Wisconsin - Platteville	
10:00-10:30 AM	Break	
10:30-11:30 AM	Concurrent Sessions	
	Room 103 Public Gardens as Sentinels against Invasive Plants Michelle Beloskur, Midwest Invasive Plant Network	Room 104 Meet Your Hosts: The Stewardship Network Lisa Brush, The Stewardship Network, Jason Frenzel, Huron River Watershed Council & Matt Preisser, Great Lakes Islands Alliance
11:30 AM-1:00 PM	Lunch , Big Ten Room	
1:00-2:00 PM	Concurrent Sessions	
	Room 103 An Investigation of Two Upland Forest Fragments and the Suitability of Fire in Their Management: Are Maples the Enemy? Robert Ayotte, Michigan Botanical Society	Room 104 Collaborative European Frog-bit delimitation, pathways of spread, treatment, and lessons learned in Oakland County, MI.* Patrick Canniff, Oakland County CISMA
2:00-2:20 PM	Break	
2:20-3:20 PM	Concurrent Sessions	
	Room 103 Bumble Bee Conservation in Michigan Requires a Community Approach* Logan Rowe, Michigan Natural Features Inventory	Room 104 Hearing the voice of the Original Stewards Kira Davis, National Parks Conservation Association
3:20-3:40 PM	Break	
3:40-4:40 PM	Concurrent Sessions	
	Room 103 Birds Eye Look at Habitat Restoration Francie Krawcke, Michigan Avian Experience	Room 104 Climate Resiliency of Native Plant Communities: An Ecohydrological Perspective Scott Dierks, GEI Consultants
4:40-5:00 PM	Break	
5:00-5:30 PM	Water Ceremony , East Patio	
5:30-7:15 PM	Dinner, Poster Reception & Ice Cream Social with the Great Lakes Leadership Academy , Big Ten Room	
7:30-9:00	Evening Program: Nocturnal Science in the Great Lakes Region , Red Cedar Room Ian Ableson, Six Rivers Land Conservancy	





Presentations that qualify for MDARD seminar recertification credits are marked with an asterisk.

Room 105 Seeing Red: Thoughts and Observations About Red Pine in its Natural Settings Throughout Michigan* Jesse Lincoln, Michigan Natural Features Inventory	Room 106 Leveraging Lake Stewardship Melissa DeSimone, Michigan Lakes and Streams Association	Red Cedar Michigan Wild Rice Initiative Katie Lambeth, Michigan Department of Environment, Great Lakes, and Energy
Room 105 Sense of Place: Facilitating Connections to the Natural World Tyler Bassett, Michigan Natural Features Inventory, Bob Kellum, Grand-Raisin Conservation Community, and Rob Luzynski, The Stewardship Network	Room 106 Building the Power of your Board Paco Ollervides, The Stewardship Network Board Chair	Red Cedar Oak Regeneration Assessment and Planning Michael Kost, University of Michigan Matthaei Botanical Gardens and Nichols Arboretum
Room 105 Growing Native Plants to Heal a Creek Benji Steenwyk, Betty Gronsmann & Haley Weesies, Plaster Creek Stewards	Room 106 Advancing Integrated River Management: Social & Technical Solutions for Whole River Systems Hannah Mico, River Network	Red Cedar Keynote Workshop: Forging New Relationships to Advance Forest and Fire Stewardship in the Great Lakes Region Evan Larson, University of Wisconsin Platteville
Room 105 Scaling Urban Reforestation Stewardship Amos White, 100K Trees for Humanity	Room 106 Harnessing Collaborative Power to Address Invasive Plants in the Great Lakes* Taaja Tucker-Silva & Theresa Gruninger, Great Lakes Commission	Red Cedar U.S. Biosphere Network: Working Together to Improve Livelihoods and Sustain Nature Kelly Ceriale & Jon Allan, US Biosphere Network



CONFERENCE AGENDA - The Stewardship Network Conference 2024

Tuesday, January 30, 2024		
7:45-8:30 AM	Registration , Hallway Breakfast , Big Ten Room	
8:30-8:35 AM	Welcome , Big Ten Room Lisa Brush, The Stewardship Network	
8:35-9:35 AM	Keynote Presentation: Reimagining (Bio)Diversity and Richness in Conservation, Big Ten Room Priya Nanjappa, National Parks Conservation Association	
9:35-10:00 AM	Break	
10:00-11:00 AM	Concurrent Sessions	
	Room 103 Unmanned Aerial Vehicles (UAV's) and their effective use in wildland conservation* Mark Ledebuhr, Application Insight, LLC	Room 104 Stewardship is Climate Action Denise Keele, Michigan Climate Action Network
11:00-11:20 AM	Break	
11:20 AM-12:20 PM	Concurrent Sessions	
	Room 103 The Restoration of Duff Lake Fen* Nathan Simons & John Brittenham, Blue Heron Ministries	Room 104 Beech Leaf Disease: A New Threat to Michigan Forests* Jenna Nutter & Lauren Bennett University of Michigan
12:20-1:50 PM	Lunch , Big Ten Room	
1:50-2:50 PM	Concurrent Sessions	
	Room 103 Eradicating racist roots from urban forest stewardship Christine Carmichael, Fair Forests Consulting LLC	Room 104 Managing for Resistance, Resilience, or Transformation: A Facilitated Conversation on Invasive Species and Climate Change* Jacqueline Courteau, Naturewrite LLC & Sheila Schueller, University of Michigan
2:50-3:10 PM	Break	
3:10-4:10 PM	Concurrent Sessions	
	Room 103 The Present Day and Future Challenge of Managing Deer Chad Stewart, Michigan Department of Natural Resources	Room 104 A Recipe for Restoration for Nature's Caretakers Susan Cross & Jon Cross, Oak Savanna Communications
4:10-4:30 PM	Farewell , South Lobby	

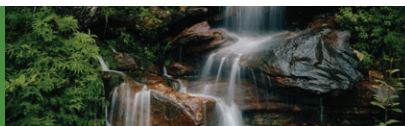


TSN Conference Book Sale is BACK!

Browse a curated collection of nature inspired titles from Schuler's Books!
20% of all sales support The Stewardship Network's programs.

SCHULER BOOKS
— & MUSIC —

Michigamme Reawakening the Senses: A philosophy of restoration (Part 1) Jeremy Siegrist, Iron Creek Ecological Restoration	Room 106 Cultural Fire: Anishinaabeg Firekeepers of the Past and Present Mary Parr, Pierce Cedar Creek Institute	Red Cedar Cultivating Teen Stewards: Hear from a panel of alumni youth participants Micah Blake-Smith, Obadiah James, Nyijah Coleman-Clark, Detroit Zoological Society/ Belle Isle Nature Center
Michigamme Reawakening the Senses: A philosophy of restoration (Part 2) Jeremy Siegrist, Iron Creek Ecological Restoration	Room 106 Enriching volunteer knowledge and expertise, engaging partners, and addressing local needs through the Michigan Conservation Stewards Program Georgia Peterson & Bindu Bhakta, Michigan State University Extension; Alexa Warwick, Michigan State University; Jason Frenzel, Huron River Watershed Council; Kirsten Lyons, St. Clair County Parks and Recreation; Sue Hodapp & Pat Reid, Friends of the Kal-Haven Trail	Red Cedar Keynote Workshop: Elevating and Including Voices and Perspectives when Collaborating for Conservation Priya Nanjappa & Kira Davis, National Parks Conservation Association
Michigamme We Are Stardust – The Interconnection of All Things Barb Barton, Endangered Species Consulting	Room 106 The Sunny Side of Stewardship: Invasive Species Edition* Kirsten Lyons, St. Clair County Parks and Recreation Commission	Red Cedar Winter Wetland Restoration Panel Discussion: Hogging, Slogging and Cold-Weather Logging* Steven Parrish, University of Michigan Matthaei Botanical Gardens and Nichols Arboretum; Matt Demmon, Feral Flora & Robb Johnston, Stantec
Michigamme Importance of Herpetofauna and Tools for Their Protection* David Mifsud, Herpetological Resource and Management	Room 106 Anishinaabe Culture in the Political Sphere Nichole Keway Biber, Anishinaabek Caucus	Red Cedar Grand Island: An ecological (and slightly hyperbolic) tour Joshua Cohen & Jesse Lincoln Michigan Natural Features Inventory



KEYNOTE SPEAKERS



Evan Larson

Professor of Environmental Sciences & Society
University of Wisconsin - Platteville

Evan Larson is a father, husband, teacher, scientist, and enthusiast of wild places. Evan's childhood took place in the woods of central Minnesota, helping his parents tend 80 acres of mixed hardwood forests. Drawn by mountains, oceans, and forests, his formal education includes an Environmental Science bachelor's degree from Willamette University, degrees in geography from the University of Tennessee-Knoxville (M.S.) and the University of Minnesota (PhD), and a Faculty Fulbright fellowship to Mid Sweden University in Sundsvall. Less formally, Evan's philosophy of life has been informed by significant doses of reflection, books, chainsaws and firewood. Evan has 22 years of experience using tree rings to investigate environmental history including past patterns of climate, disturbance, and forest change. As a Professor in the Department of Environmental Sciences & Society at the University of Wisconsin-Platteville, Evan teaches courses that blur the lines between physical and cultural geography and that are infused with undergraduate research in search of transformative learning experiences.

The work that is currently at the center of Evan's thoughts and energy is fueled by the enthusiasm of amazing collaborators who are together working to re-story the interwoven relationships among people, fire, and pine in Great Lakes Forests.



Priya Nanjappa

Vice President of Conservation Programs
National Parks Conservation Association

Priya Nanjappa is the Vice President of Conservation Programs for the National Parks Conservation Association. She has spent over 20 years in the world of conservation science and policy following her Master's degree in Biology with an emphasis in wildlife ecology and conservation. Her experience ranges from federal and state government to nonprofit management, most recently having served as a Commissioner specializing in Wildlife, Environment, and Reclamation for the Colorado Oil and Gas Conservation Commission, appointed by Governor Polis. Prior to this role, she was the Director of Operations for the nonprofit organization, Conservation Science Partners (or CSP), which is headquartered in Truckee, California and where she served as the lead for the Fort Collins, Colorado office. Priya's work has involved coordination between various agencies and partners, implementing conservation policies and guidance nationally and internationally. She has maintained a steady number of scientific publications, and has led numerous interdisciplinary teams to aid agencies and landowners in various aspects of species and habitat conservation or management decisions.

Priya was the 2019 recipient of the Partners in Amphibian and Reptile Conservation (PARC) Visionary Leader Award — the first woman and second person of color to receive this award. She has twice been a mentor for the David H. Smith Postdoctoral Conservation Fellowship Program.

She has been passionate about inclusivity, equity, and diversity, and has been committed to influencing and creating changes in policies and practices in several of her past roles. Priya recently served as a mentor in the inaugural cohort of Next100 Colorado, designed to help connect Colorado's emerging and seasoned leaders of color through a series of partnerships, network formation, and leadership building. She is currently a co-lead of the Public Lands Working Group for the America The Beautiful For All Coalition, whose aim is to reflect the diversity of America and center the voices of people of color working to conserve 30% of our public lands, waters, and oceans by 2030.

She also really loves toads.





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PRESENTATION ABSTRACTS (Organized alphabetically)



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A RECIPE FOR RESTORATION FOR NATURE'S CARETAKERS

Native plant gardening is not just a passing fad. It is a critical step in using biodiversity to reduce the negative impacts of climate change. Best of all? Citizens don't have to be master gardeners or biologists to become nature's caretakers. For Susan and Jon Cross, a publication by The Nature Conservancy and their local metroparks system ignited a mission to restore the rare habitat where they live, The Oak Openings Region (located in Southeast Michigan and Northwest Ohio). The Crosses have restored their own 20 acres of rare woodland, sand barren, and wet prairie to provide a home for rare and state listed species. Their recipe for restoration models how citizens, no matter where they live, can contribute to healthy environments, clean water, and the return of native species. After this session, attendees will be able to:

1. Identify two basic steps for eco-restoration
2. Outline one immediate step toward nature stewardship
3. Outline one future step to inspire nature steward

Jon Cross & Susan Cross, Oak Savanna Communications

ADVANCING INTEGRATED RIVER MANAGEMENT: SOCIAL & TECHNICAL SOLUTIONS FOR WHOLE RIVER SYSTEMS

Integrated River Management (IRM - also referred to as Integrated Floodplain Management or IFPM) is a whole-system approach to coordinating restoration, conservation, and preservation of waterways. River Network has been building a technical and social understanding of this strategy, working to identify and develop mechanisms for upstream-downstream connectivity, equitable development, policy, and zoning efforts, and coordinating the many partners and decision-makers involved in river management. All of this, alongside existing research on Best Management Practices for improving waterways. We are excited to



bring our initial findings forward and discuss the impact of IRM on planning and implementation efforts across the country. IRM requires the marriage of technical river restoration work with intentional social and political structures: in this session we'll share what we've learned so far and invite feedback on what needs we can continue addressing through our research.

Hannah Mico, River Network

AN INVESTIGATION OF TWO UPLAND FOREST FRAGMENTS AND THE SUITABILITY OF FIRE IN THEIR MANAGEMENT: ARE MAPLES THE ENEMY?

The Southeast Michigan Land Conservancy (SMLC), established in 1988, owns and manages 18 Nature Preserves and 15 conservation easements. Several of these parcels contain upland forest fragments comprised of either mesic southern or dry-mesic southern forest communities. An understanding of the ecology of these forests is necessary in formulating appropriate management plans. From 2008-2023 an investigation of the forested sections of the Morris-Reichert and Springhill Nature Preserves, of the SMLC, was conducted. Using an integrated ecosystem approach, variables including microclimate, physiography, hydrology, current forest communities, and estimates of pre-colonial cover types were employed to describe the forest ecosystems. Although both preserves are situated on similar landforms, with similar soils, recommendations regarding forest management on these two preserves diverge considerably – particularly regarding the application of prescribed fire.

Robert Ayotte, Michigan Botanical Society



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PRESENTATION ABSTRACTS (Organized alphabetically)



ANISHINAABE CULTURE IN THE POLITICAL SPHERE

Water Protectors committed to shutting down oil pipelines across Turtle Island, tribal culture carriers renewing sovereignty through traditional foods, Indigenous advocates for the wildlife relatives who embody our totems and enable our ceremonial practices - these are all examples of how Anishinaabek and other tribal nations are taking responsibility at the time of the 7th Fire. This presentation will focus on how the instructions found in ancestral stories and original languages provide the basis for activism and actions aimed at changing systems of exploitation and extraction into sites of reparation and restoration. From my perspective as a tribal citizen committed to political engagement on local, State and Federal levels, this presentation will explore how traditional understandings exist in tension with status quo incrementalism in political spheres that are nevertheless essential to the recovery of biodiverse ecosystems.

Nichole Keway Biber, Anishinaabek Caucus

BEECH LEAF DISEASE: A NEW THREAT TO MICHIGAN FORESTS

Beech leaf disease (BLD) is a novel pathogen affecting the American beech tree (*Fagus grandifolia*). Discovered in Ohio in 2012, it has since spread rapidly across eastern North America and was first observed in Michigan in 2022. BLD disproportionately affects understory saplings, with mortality occurring within 2 to 5 years, though mortality of overstory trees has also been observed. As such, this pathogen has great potential to harm Michigan beech-maple forests. Early detection and rapid response (EDRR) are crucial to minimize these effects. To aid in ongoing EDRR efforts, our University of Michigan capstone project team surveyed 21 plots in southeast Michigan for disease symptoms and forest structure. We will synthesize the results of this survey and a comprehensive literature review into a report and presentation aimed at providing management strategies to a variety of stakeholders.



We will also host workshops and produce educational materials to increase public awareness.

Jenna Nutter & Lauren Bennett, University of Michigan

BIRDS EYE LOOK AT HABITAT RESTORATION

Michigan Avian Experience will take you on an electronic birding tour focusing on the bird species that benefit from your hard work. From grasslands to northern forests and a few wetlands and beaches in between. We will dive into the population changes of North America's small falcons, learn a few field LBJ calls, and celebrate the most successful piping plover nesting year to date. Some of our feathered friends will stop by to model the seven S's of bird identification helping you to find the hidden bird life at your site.

Francie Krawcke, Michigan Avian Experience

BUILDING THE POWER OF YOUR BOARD

This session is geared primarily at senior leadership, Executive Directors and chairs of Nominating and Governance Committees within boards of directors to environmental nonprofits organizations. Because of the unique role that board members play in the strategy of their organization, it is imperative to be intentional in the recruitment and retention practices that will build power for the environmental movement. Elevating the gifts and honing on the expertise of these fiduciaries and ambassadors to your organization become key components in advancing your mission and programs. We will discuss and share a number of best practices that we have learned over the course of 2 decades and that have worked for us in transforming the internal culture of boards in this sector into more dynamic, just and equitable spaces.

Paco Ollervides, The Stewardship Network Board Chair



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PRESENTATION ABSTRACTS (Organized alphabetically)

BUMBLE BEE CONSERVATION IN MICHIGAN REQUIRES A COMMUNITY APPROACH

Bumble bees are charismatic pollinators that play critical roles in the stability of plant-pollinator communities. Historically, Michigan contained approximately 20 unique species of bumble bees, but contemporary surveys place that number closer to 15, prompting conservation initiatives to protect bumble bee species in decline. Both conservation scientists and the public can play major roles in supporting bumble bees and their associated habitats. This presentation will provide a brief overview of Michigan bumble bees, including species diversity, distribution, and conservation status, and introduce a community science program to track bumble bees across the state.

Logan Rowe, Michigan Natural Features Inventory

CLIMATE RESILIENCY OF NATIVE PLANT COMMUNITIES: AN ECOHYDROLOGICAL PERSPECTIVE

Land development and land management still under-value the role plants play in managing water. Nature-based infrastructure is living infrastructure. We recognize life by its capacity to build structure and organize its surroundings. Developments in ecohydrology and critical zone research can help shed light on the complexity, ubiquity and

influence that plants exert on managing water at the earth's surface. Plants exert control over the vertical and horizontal fluxes of water in the ground and in the lower atmosphere in order to provide themselves with the longest continuous supply of water over the growing season as possible. In the process they build soil and soil communities and mediate the carbon and energy balance at the earth's surface. Hopefully, understanding more about the role plants play in structuring the living world will help re-establish their proper value and foster a more robust human stewardship of our co-habitants on this planet.

Scott Dierks, GEI Consultants

COLLABORATIVE EUROPEAN FROG-BIT DELIMITATION, PATHWAYS OF SPREAD, TREATMENT, AND LESSONS LEARNED IN OAKLAND COUNTY, MI.

Oakland County Cooperative Invasive Species Management Area in partnership with Huron River Watershed Council, Friends of the Rouge, and Clinton River Watershed Council have been delimiting the spatial occurrence of European Frog-bit since its initial detection in the county in 2018. This presentation will discuss the spatial progression of detection across private and publicly accessible sites, pathways of spread,



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The MNFI is a program of MSU Extension, and our mission is to guide the conservation of Michigan's biodiversity by providing the highest quality scientific expertise and information. As stewards of the Michigan Natural Heritage Database, we manage the most comprehensive source of information on our State's natural communities and rare species. For over 40 years, we have engaged in research, monitoring, planning, and educational activities to help conserve our biodiversity for future generations.

Visit our website to learn more about Michigan's biodiversity and support our work: <https://mnfi.anr.msu.edu/>



and treatment including lessons learned for future management efforts.

Patrick Canniff, Oakland County CISMA

CULTIVATING TEEN STEWARDS: HEAR FROM A PANEL OF ALUMNI YOUTH PARTICIPANTS

The Detroit Zoological Society has created the Environmental Stewardship Internship, a paid internship with funding provided by the Michigan Department of Natural Resources and other donors. In this eight-week program, teens who live in underserved cities are connected to various skill-building experiences and mentorship opportunities with diverse professionals in the natural resources field. Designed for teens of Color, supported and facilitated by professionals of Color, this paid internship provides participants opportunities to explore what it means to feel belonging in the outdoors. Through opportunities to experience new outdoor recreation activities, team-building, and a variety of skill-based projects, youth become empowered and elevate each other to overcome barriers. In this session, ESI alums will share some of the stories, activities, and resources from this meaningful program.

Micah Blake-Smith, Nyijah Coleman-Clark, Obadiah James, Detroit Zoological Society & Belle Isle Nature Center



Ignite Positive Change

Join the Detroit Zoological Society in making a meaningful difference for animals and nature at home, along the Great Lakes and around the world. Connect with us at the Stewardship Network 2024 Conference. Every connection sparks a brighter future.

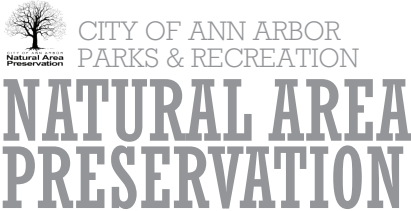
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PRESENTATION ABSTRACTS (Organized alphabetically)



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Our most sincere thanks to everyone who chose to donate to The Stewardship Network in 2023. As a 501(c)(3) non-profit organization, we take seriously our role as stewards in every sense of the word. Your support is vital to our mission and we never forget it.

CULTURAL FIRE: ANISHINAABEG FIREKEEPERS OF THE PAST AND PRESENT

Indigenous communities of the past coexisted intimately with the land, possessing profound ecological knowledge and employing tools such as fire to maintain community balance. For the Anishinaabeg, Ishkode, or “fire” in Anishinaabemowin, is a sacred spirit essential in ceremonies and stewardship of plant and animal relatives. In this presentation, Parr, an Anishinaabe woman, land steward, fire practitioner, and graduate student, will highlight Anishinaabeg heritage, indigenous fire ecology, modern indigenous-led efforts, and using traditional ecological knowledge to ask contemporary fire science questions.

Mary Parr, Pierce Cedar Creek Institute

ELEVATING AND INCLUDING VOICES AND PERSPECTIVES WHEN COLLABORATING FOR CONSERVATION

An interactive discussion of opportunities to widen perspectives and understanding of conservation issues to ensure intentional and authentic collaboration with new communities or groups whose experiences may differ from your own.

Priya Nanjappa & Kira Davis, National Parks Conservation Association

ENRICHING VOLUNTEER KNOWLEDGE AND EXPERTISE, ENGAGING PARTNERS, AND ADDRESSING LOCAL NEEDS THROUGH THE MICHIGAN CONSERVATION STEWARDS PROGRAM

Michigan State University Extension's Conservation Stewards Program (CSP) helps individuals gain knowledge and expertise to engage in conservation stewardship activities in their local communities. This program introduces participants to the foundations of conservation, Michigan's natural communities, and ecosystem management



principles. This hybrid program provides weekly on-line educational content and in-person instruction consisting of presentations and hands-on field experiences. Conservation-related partner organizations are a critical component for CSP's success. These organizations enrich the program's content and field experiences, and in turn, they receive highly knowledgeable graduates as potential volunteers. This presentation will focus on the diversity of implementation teams operating across seven local cohorts. We will also highlight how organizations benefit from the program and share student success stories that resulted in positive impacts in their local communities.

Georgia Peterson & Bindu Bhakta, Michigan State University Extension; Alexa Warwick, Michigan State University; Jason Frenzel, Huron River Watershed Council; Kirsten Lyons, St. Clair County Parks and Recreation Commission; Sue Hodapp & Pat Reid, Friends of the Kal-Haven Trail

ERADICATING RACIST ROOTS FROM URBAN FOREST STEWARDSHIP

In the 1930's, the federal government rated neighborhoods according to risk for mortgage lenders. "Redlined" neighborhoods were those deemed "hazardous" for investors, a title determined largely by the proportion of non-white and immigrant residents living there at the time. Formerly "redlined" areas are now substantially hotter, on average, and with fewer trees than those ranked "desirable" due to longstanding disinvestment. These racist roots of modern urban and community forestry not only impact the tree canopy, but also residents' receptiveness to new trees in their communities. This presentation will describe why residents in Detroit, Michigan submitted "no-tree requests" when offered free street trees and share lessons for how to engage marginalized communities equitably in the process of planting and caring for trees where they live. This presentation will also cover examples of how these equitable community engagement approaches have been applied elsewhere, like Ann Arbor, MI.

Christine Carmichael, Fair Forests Consulting LLC



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PRESENTATION ABSTRACTS (Organized alphabetically)

FORGING NEW RELATIONSHIPS TO ADVANCE FOREST AND FIRE STEWARDSHIP IN THE GREAT LAKES REGION (KEYNOTE WORKSHOP)

This session will begin with a description of the *FIRE-PLAN: Merging diverse knowledge systems to advance restoration of fire-dependent lands and cultures in the Great Lakes region* project, a newly funded NSF Planning Grant, and end as a workshop to identify opportunities for future collaborations. The FIRE-PLAN project will support a series of listening sessions at locations across the Upper Great Lakes from 2024-2025 centered on the intent to bring together Fire Ecologists, Fire Practitioners, and Indigenous Knowledge Practitioners in a collaborative space to co-produce a larger grant proposal to support a region-wide synthesis of tree-ring data, Indigenous Knowledge, and landscape modeling to better understand the foundational role of people and fire in the forests of the Great Lakes Region. Please join us to learn about this emerging project and to contribute your thoughts about potential collaborations between the project team and the Stewardship Network.

Evan Larson, University of Wisconsin - Platteville

GRAND ISLAND: AN ECOLOGICAL (AND SLIGHTLY HYPERBOLIC) TOUR

A complex interplay of disturbance factors has shaped the patterning of ecosystems across Grand Island. In 2023, Michigan Natural Features Inventory launched a three-year effort to survey islands in Lake Superior. In this presentation, we will provide an overview of our ecological surveys of Grand Island, a National Recreation Area managed by the Hiawatha National Forest, a key partner for this endeavor. We will describe our methods for prioritizing surveys in the ecologically most significant places and how we employ the latest technology to inform this process. The presentation will offer a glimpse of the ecological splendor of Grand Island including the mind-boggling vertical gardens of the sandstone lakeshore cliffs, the majestic old-growth forests, and the amazing complexity of the tombolo. We will conclude the presentation with lessons learned from our intensive island experience.

Joshua Cohen & Jesse Lincoln, Michigan Natural Features Inventory



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4 KEYNOTE SPEAKERS



CLIMATE RESILIENCE
Rufus Isaacs, Ph.D.
Michigan State University



STEM EDUCATION
Kristie Reddick, M.S. &
Jessica Honaker, M.S.
The Bug Chicks



ONE HEALTH
Ben Beard, Ph.D.
U.S. Centers for Disease
Control and Prevention



CLOSING SESSION
May Berenbaum, Ph.D.
University of Illinois Urbana-Champaign
Head of the Department of Entomology, Swanlund Chair of Entomology, and recipient of the National Medal of Science, Berenbaum will be the closing speaker to wrap up two days of learning, networking, and collaboration.





GROWING NATIVE PLANTS TO HEAL A CREEK

Plaster Creek Stewards, an initiative of Calvin University, is a community-based watershed group working to return health and beauty to the Plaster Creek Watershed. In this talk we will describe how we grow native plants to support green infrastructure initiatives, including urban curb-cut rain gardens and large floodplain restoration projects. Over the 14 years of our efforts, we have also learned the importance of engaging our local community in this restorative work, bringing watershed residents together from different cultural, socioeconomic, and educational backgrounds. When people work together and get to know each other, care for the land and for each other grows. This talk will highlight some of the more successful examples of enhancing environmental and human well-being focused on restoring a highly degraded urban stream.

Benji Steenwyk, Betty Gronsman & Haley Weesies, Plaster Creek Stewards

HARNESSING COLLABORATIVE POWER TO ADDRESS INVASIVE PLANTS IN THE GREAT LAKES

Invasive species collaboratives benefit from the collective efforts of diverse stakeholders to advance research and inform effective management. The Great Lakes Phragmites Collaborative (GLPC) and European Frog-bit (EFB) Collaborative provide two successful case studies for implementing Collective Impact at a regional scale. The GLPC formed in 2012 to facilitate communication among stakeholders across the region and serve as a resource center for information on invasive Phragmites biology, management, and research. The EFB Collaborative was established in 2018 to improve coordination and collaboration among stakeholders and build consensus on next steps for EFB management and research in Michigan and was expanded to include other Great Lakes partners in 2022. We highlight the potential of partnerships, shared research, information sharing, and coordinated management strategies to manage both an established and newly invading invasive plant in the Great Lakes.

Taaja Tucker-Silva & Theresa Gruninger, Great Lakes Commission



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PRESENTATION ABSTRACTS (Organized alphabetically)



EVERY PLACE, EVERY MICHIGANDER

From Detroit to Menominee, Benton Harbor to the Sault, the Michigan Environmental Council is a network of more than 100 organizations reaching across the Mitten and tackling diverse environmental issues.

To build the future we want for Michigan, it's going to take our collective strength as one, united ecosystem. We need your team in this fight.



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HEARING THE VOICE OF THE ORIGINAL STEWARDS

The National Parks Conservation Association acknowledges that all national park lands are on native land. NPCA will present through a tribal lens the importance of bringing forth the voices of the original stewards and the vital need to incorporate traditional ecological knowledge in our management decisions within the National Park Service. Kira Davis, Great Lakes Senior Program Manager will discuss supporting executive orders, successes and lessons learned with specific case studies and what can be done support the process.

Kira Davis, National Parks Conservation Association

IMPORTANCE OF HERPETOFAUNA AND TOOLS FOR THEIR PROTECTION

Amphibians and reptiles are key indicators of ecosystem function making them critical for conservation and as markers for evaluating environmental health. This presentation will focus on the recently completed Michigan Herpetofauna Habitat Assessment Tool (Herp HAT) and the applications of this important assessment

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tool for protecting landscapes and species. The presentation will also showcase several Best Management Techniques (BMPs) for restoring and improving habitat for amphibians and reptiles taken from the recently released Second Edition of the Michigan Amphibian and Reptile Best Management Practices Manual.

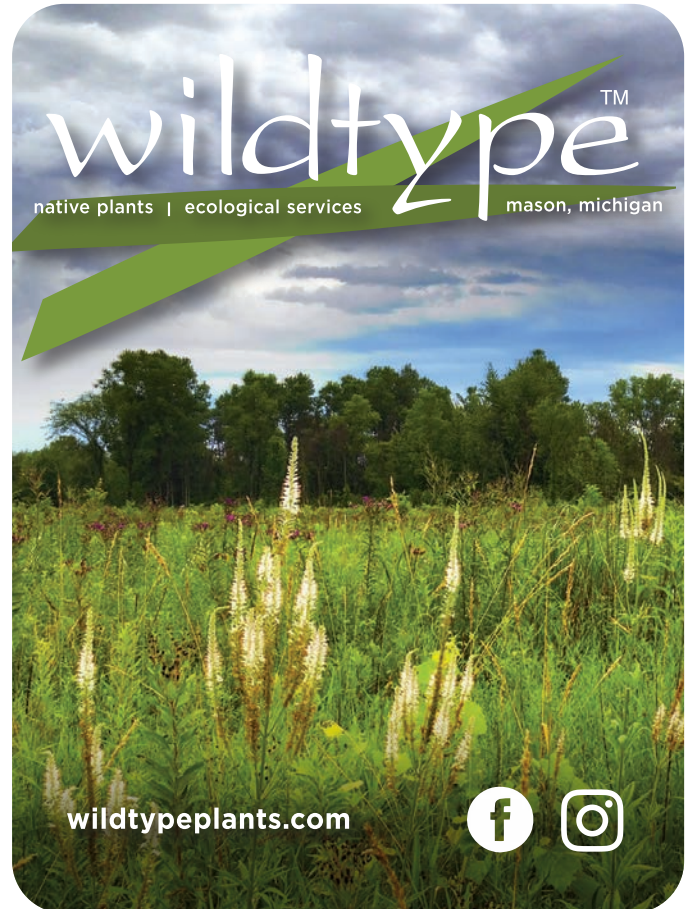
David Mifsud, Herpetological Resource and Management

LEVERAGING LAKE STEWARDSHIP

The care and protection of a body of water is a huge task. It is often taken on by volunteers who love the water but really don't have a full understanding of what it takes to keep it clean. This presentation is about identifying and putting the pieces together for success in this multifaceted work:

1. Organizing volunteers - why associations are important, spreading the work around with committees, and utilizing the experts in your area for consultation and help.
2. Inspiring participation - planning activities that bring people together, providing education and examples of good practices, managing an outreach strategy.
3. Engaging public officials - being present at meetings, asking questions or offering ideas, and influencing decisions that will impact water quality.
4. Evaluating progress - take a look at what works, don't be afraid to make changes, repeat steps.

Melissa DeSimone, Michigan Lakes and Streams Association





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Do you love The Stewardship Network Conference but wish it could happen all year long? Tune in to our long-running #TSNwebcast on the second Wednesday of each month at noon ET for twelve slices per year of everything that makes this event so special – leading presenters, an energetic audience of your peers, and relevant content with great discussions.

Register for upcoming episodes or review past recordings at stewardshipnetwork.org/webcast

PRESENTATION ABSTRACTS (Organized alphabetically)



MANAGING FOR RESISTANCE, RESILIENCE, OR TRANSFORMATION: A FACILITATED CONVERSATION ON INVASIVE SPECIES AND CLIMATE CHANGE

Natural area stewards face diverse and increasing numbers of invasive species, while climate change also places stress on local ecosystems. Individually, invasive species and climate change are major threats. Taken together, and interacting, they pose major challenges. In the face of this, managers can choose among 3 basic strategies: 1) Resist change and try to main local ecosystems as they are; 2) Accept/direct change, acknowledging that conditions might be so transformed that natural communities can no longer maintain the

same species; or 3) Manage for resilience, with a focus on maintaining ecosystem processes and functions while accepting that some species might change. This session will encourage participants to focus on the brief paper from Bradley et al. 2019 ("Double Trouble," <https://doi.org/10.7275/djdw-cm44>) to consider different approaches and management strategies, looking at specific examples of whether, when, and how we decide to resist, adapt, or transform.

Jacqueline Courteau, NatureWrite LLC and Sheila Schueller, University of Michigan

MEET YOUR HOSTS: THE STEWARDSHIP NETWORK

Whether this event is your first experience with The Stewardship Network (TSN) or you're a longtime ally and collaborator, this session is your chance to learn more about where we come from and where we're headed next. Join TSN Staff and TSN Member Community Coordinators for a lively panel and presentation about our purpose, programs, and progress. Better yet, we'll introduce you to a number of year-round programs and seasonal campaigns we've built to amplify the impact you have in your communities and in your ecosystems. With 20+ years of success in our mission to connect, equip, and mobilize, TSN is ready to meet you wherever you are on your stewardship journey. Drop by and we'll tell you all about it. Bonus: Lisa may or may not make you a quilt right there on the spot. Probably not, but you never know!

Lisa Brush, The Stewardship Network; Jason Frenzel, Huron River Watershed Council and Matt Preisser, Great Lakes Islands Alliance

MICHIGAN WILD RICE INITIATIVE

The Michigan Wild Rice Initiative (MWRI or Initiative) stems from a collective understanding among State and Tribal governments that the protection and restoration of wild rice in Michigan should be elevated in importance.





Since 2017, it has brought together specialists and managers from all 12 federally recognized tribes, multiple state departments and federal agencies, and others to share information, coordinate approaches, and elevate awareness about wild rice conservation and restoration. The MWRI seeks to protect, preserve, and restore manoomin/mnomen and manoomin/mnomen culture in Michigan through collaboration, education, research, policy and stewardship, to enhance ecosystem health and benefit present and future generations. A priority of the Initiative is the development of a Tribal-State Manoomin/Mnomen Stewardship Plan. The Initiative anticipates adopting a Plan in late spring/early summer 2024.

Katie Lambeth, Michigan Department of Environment, Great Lakes, and Energy

OAK REGENERATION ASSESSMENT AND PLANNING

Matthaei Botanical Gardens and Nichols Arboretum is in the process of assessing oak and hickory regeneration in several oak-hickory forests in southeast Michigan. Preliminary data indicate that in some locations, large understory oaks and hickories are common, but all forests assessed generally lack smaller understory and sapling oaks and hickories. In August of 2023, the forests at one of our study sites, Nichols Arboretum, experienced intense straight-line winds that created a series of canopy gaps of varying size. These newly created gaps provide an opportunity to actively engage in gap management and planting to direct gap colonization towards oaks and hickories. Oaks are considered a keystone species throughout their ranges, supporting a large diversity of phytophagous insects, and in turn, a broad diversity of wildlife who feed on these insects, as well as many animals that rely on the oak mast.

Michael Kost, University of Michigan Matthaei Botanical Gardens and Nichols Arboretum



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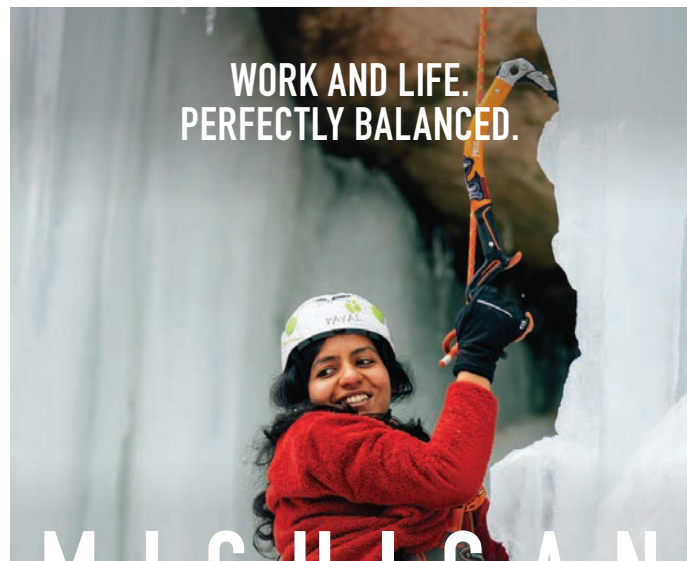
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PRESENTATION ABSTRACTS (Organized alphabetically)



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GARDENS AS SENTINELS AGAINST INVASIVE PLANTS

Due to their unique status as living museums of plants from around the world, public gardens and arboreta can play an important, pro-active role in assessing which non-native plants exhibit invasive tendencies. These institutions have the access and staff expertise to observe the reproduction and spread of plants that are not well known and may not be available in the horticultural trade and can make recommendations about these plants' capacity to become invasive based on those observations. The Public Gardens as Sentinels against Invasive Plants (PGSIP) initiative has developed guidelines and a database for public gardens in North America to share

information about plant taxa they are observing escaping from cultivation. The observations shared by public gardens have enabled PGSIP to develop resources that can help with invasive species detection and response. Learn more about the resources available from PGSIP and how public gardens can contribute to this growing body of data.

Michelle Beloskur, Midwest Invasive Plant Network

REAWAKENING THE SENSES: A PHILOSOPHY OF RESTORATION

Part 1: A conversation concerning the goal of restoring humans to reinhabit our bioregions in relationships of reciprocity alongside our work of restoring oak savanna, prairie, etc... Land stewardship field work can be coupled with wilderness awareness practices to deepen our connections to the landscapes we work and live in.

Part 2: We will go outside for a walk down the path and try some of the wilderness awareness activities such as tasting the snow, listening to the river flow, smelling dried vegetation from the previous growing season, etc... The point being to move beyond the mere scenery of nature into full bodied participation.

Jeremy Siegrist, Iron Creek Ecological Restoration

SCALING URBAN REFORESTATION STEWARDSHIP

Amos White, Founder and Chief Planting Officer for 100K Trees for Humanity, will present the California Urban Greenbelt Initiative, an environmental justice urban reforestation campaign to mobilize citizen tree stewards to increase tree canopies to 30% in every urban community by 2030.

The presentation will emphasize how it is:

- Organizing cities, schools, and communities to plant trees.



- Accelerating cities' Climate Action Plan goals to achieve carbon neutrality by 2030.
- Promoting equitable distribution of tree canopies, targeting a 30% increase.
- Enhancing hydrological resilience and improving soil health.
- Enabling cities to generate increased revenue through ecosystem services.
- Inspiring and training thousands of school students as stewards growing acorns into a healthy tree
- Features a workforce development framework that trains individuals to plant and steward trees.

Initiative partners include: Sierra Club, Cal Berkeley Haas School of Business, Google, OSH & more.

Amos White, 100K Trees for Humanity

SEEING RED: THOUGHTS AND OBSERVATIONS ABOUT RED PINE IN ITS NATURAL SETTINGS THROUGHOUT MICHIGAN

The ecological and social roles of red pine (*Pinus resinosa*) in Michigan are complex and interesting. It occurs in a range of natural community types but has also served as an important tool for restoring millions of acres following the destructive harvest of most of Michigan forests in the late 1800s. However, the pattern of timber harvest, the reproductive strategy of red pine, and the prevalence of plantations has caused our understanding of the species to be obscured. During the growing season of 2023, we surveyed several natural red pine stands on state land in Michigan's central Upper Peninsula to understand herbaceous composition, demographics, variability, threats, and management strategies for the highest quality sites. This talk will explore the results of our ecological surveys, the range of habitats that red pine occurs in, features of old growth trees, concerning trends in red pine management, and approaches for managing the few remaining areas of natural red pine.

Jesse Lincoln, Michigan Natural Features Inventory



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The Department of Plant Biology has over 35 faculty members who study all aspects of plant biology from the level of molecules to ecosystems. As our faculty focus on basic research in all disciplines of plant biology, our students are trained to integrate information between different hierarchies of biological organization. The research programs in the department are highly diverse and our graduate program is flexible. Each student works with their committee to set a curriculum that best suits their interests and background.

www.plantbiology.natsci.msu.edu



SAUGATUCK
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PRESENTATION ABSTRACTS (Organized alphabetically)

SENSE OF PLACE: FACILITATING CONNECTIONS TO THE NATURAL WORLD

In 2022, Grand-Raisin Conservation Community (GRCC) and the Michigan Natural Features Inventory developed what has come to be known as the Sense of Place project. As conceived, the project would create a readily accessible inventory of what ecologically characterizes and underpins the unique appeal of the Grand River and Raisin River headwater areas in Michigan, which could then be used to help decision-makers, stakeholders, and members of the general public to deepen their appreciation for the natural areas in which they live and work. In practice, GRCC has developed a series of “home walks” that are meant to help attendees connect with the places that they visit in a meaningful way through facilitated explorations that involve the host sharing their personal connections to the land and the history of the natural features and life forms that call it home. Join representatives from GRCC, MNFI, and TSN as we explore the concept of Sense of Place in a community roundtable discussion.

Bob Kellum, Grand Raisin Conservation Community, Rob Luzynski, The Stewardship Network, and Tyler Bassett, Michigan Natural Features Inventory

STEWARDSHIP IS CLIMATE ACTION

Stewardship is crucial to shaping effective responses to climate change and developing the skills of the next generation of leaders to empower personal and collective action. This call to action will explore: 1) how to build on and transform Michiganders existing climate beliefs, 2) the importance of a justice-centered approach, and 3) the status and potential impact of Michigan climate and energy policy.

Denise Keele, Michigan Climate Action Network

THE PRESENT DAY AND FUTURE CHALLENGE OF MANAGING DEER

White-tailed deer are a historically important species in Michigan. Management has always been through regulated hunting, but as hunter numbers experience statewide and national declines, the ability to reduce deer populations to balanced levels is becoming more challenging. Several regulation changes in recent years have proven unsuccessful at increasing antlerless harvest, and alternative proposals typically brought forward offer little evidence of being successful. Clearly, a paradigm shift is needing to occur to manage white-tailed deer into the future, but what that looks like and how it may be received are still great unknowns.

Chad Stewart, Michigan Department of Natural Resources

THE RESTORATION OF DUFF LAKE FEN

The Duff Lake Fen Restoration project was an opportunity to restore 129 acres of prairie-oak continuum within the Lakes Country ecoregion of northeast Indiana. The site, a former cattle operation, is owned by the LaGrange County Parks and Recreation Department. With grants from the National Fish and Wildlife Foundation and the Conservation Fund, Blue Heron Ministries hydrologically and vegetatively restored the lowland and upland portions of the site. Over a nine-year period, the project outcomes included the in-filling of over 1,200 linear feet of ditch, control of herbaceous and woody invasive species, installation of over 60 acres of wetland and upland prairie seed mixes, and creation of 800 linear feet of stream meanders. Beyond the initial restoration efforts, Blue Heron Ministries continues to manage the property with the Parks Department to ensure biological diversity and habitat for several endangered, rare, and threatened flora and fauna.

Nathan Simons & John Brittenham, Blue Heron Ministries



THE SUNNY SIDE OF STEWARDSHIP: INVASIVE SPECIES EDITION

Got the buckthorn blues? Feeling hopeless about Hesperis? Are you frustrated by frog-bit? Then this one's for you! As environmentalists and stewards, our news feeds are full of dire predictions about climate change, politics, and biodiversity, and many of us can't even escape for a walk in the woods without noticing multiflora rose or garlic mustard. Yet there is much joy and hope to be found in working on invasive species issues. This is a frontier on which seemingly small, individual actions can have outsized positive impacts, and everyone has the potential to learn, share, and make a difference. When we work collectively on invasive species challenges, the effects can be utterly transformative. You'll have a chance to ask questions and share your own invasive species success stories during this interactive session.

Kirsten Lyons, St. Clair County Parks and Recreation Commission

U.S. BIOSPHERE NETWORK: WORKING TOGETHER TO IMPROVE LIVELIHOODS AND SUSTAIN NATURE

US Biosphere Network (USBN) consists of 28 internationally recognized places across the continental US, the Caribbean, Alaska, & Hawai'i called biosphere regions. Biosphere regions are learning places for sustainable development, where interdisciplinary approaches are developed to understand and manage changes and interactions between social & ecological systems, including climate change and biodiversity management. Directly aligned with TSN, the USBN connects, equips, and mobilizes people and organizations to care for the land and water where they live. Through our international network of 748 UNESCO Biosphere Reserves we exchange knowledge, research, and resources to address the world's most pressing sustainable development issues including biodiversity loss, climate change, and community and organizational capacity. This presentation highlights USBN's key projects & priorities, and identifies opportunities for our two networks to work together to improve human connection to nature.

Kelly Cerialo & Jon Allan, US Biosphere Network



Institute of Water Research
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Institute of Water Research

The Institute of Water Research at MSU is dedicated to developing science-based technology, research, educational programs, and partnerships to help understand and address critical water issues in Michigan and the Great Lakes region.

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PRESENTATION ABSTRACTS (Organized alphabetically)

UNMANNED AERIAL VEHICLES (UAV'S) AND THEIR EFFECTIVE USE IN WILDLAND CONSERVATION

Unmanned Aerial Vehicles (UAV's) are quickly changing the game in wildlands management: used for remote sensing and map generation in Early Detection/Rapid Response, herbicide application in invasive species, Larvaciding for mosquitos, and even seeding trees and other terrestrial seed spreading. They can bring speed, precision and efficiency to activities that are currently difficult to impossible. This talk will briefly cover remote sensing then focus on spray and solids applications scenarios. Expectation management and evaluation methods to assure successful UAV applications will be covered. Things to consider when deciding whether to contract or bring drone applications in-house will be discussed. Attendees should come away from this talk with a solid understanding of how to approach and evaluate UAV's for their operations.

Mark Ledebuhr, Application Insight, LLC



WE ARE STARDUST – THE INTERCONNECTION OF ALL THINGS

Out of the 100 billion stars within our Milky Way Galaxy, Earth is the only planet we know of that sustains a remarkable, interconnected web of life. The elements found on our planet originated in space and bind us completely – we are truly made of stardust. Barb's recent passion is astrophotography and in this multimedia presentation we will explore the beauty and vastness of nebulae in our galaxy, visit other galaxies far, far, away, and shift our perspectives to see the interconnection of all things on Earth and in space. Attendees will also learn how they can get started in the hobby of astrophotography.

Barb Barton, Endangered Species Consulting

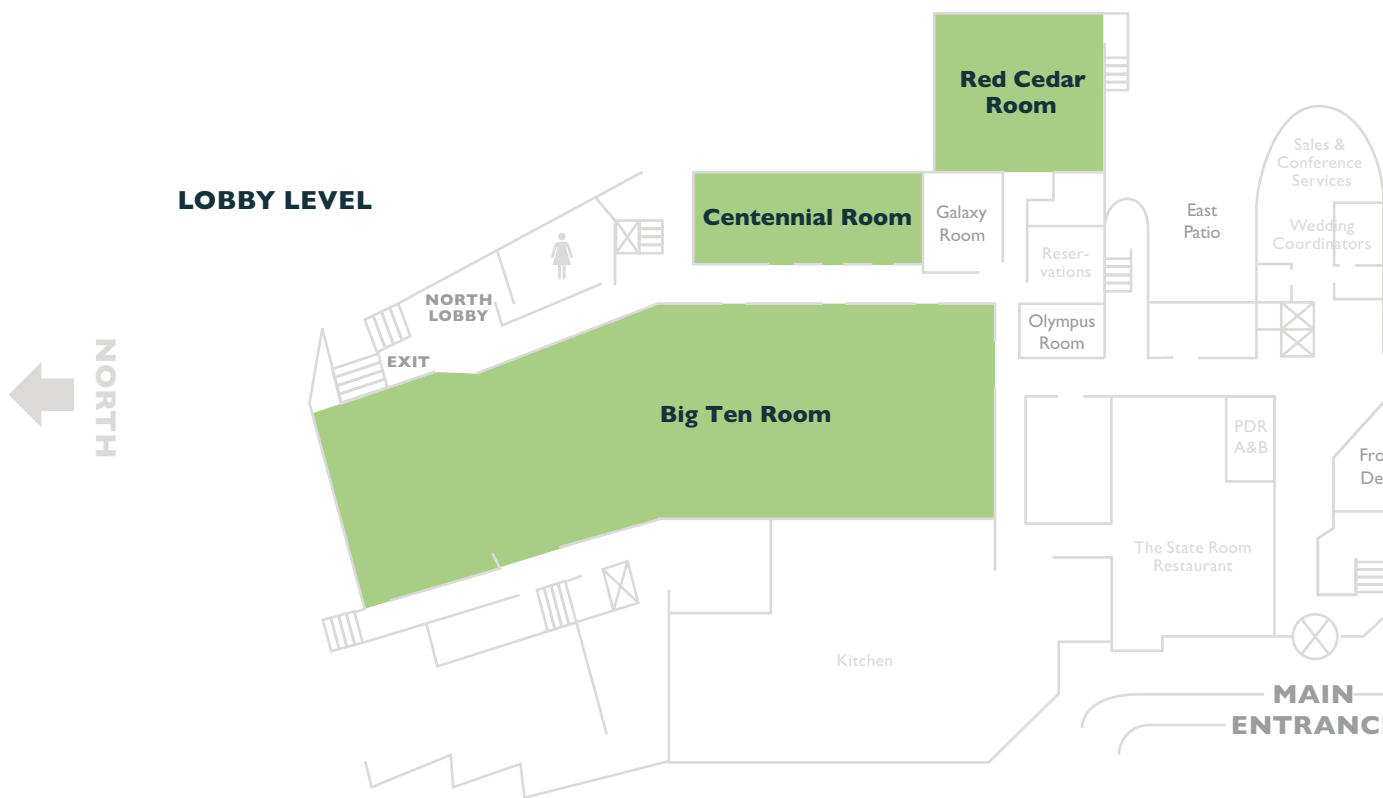
WINTER WETLAND RESTORATION PANEL DISCUSSION: HOGGING, SLOGGING AND COLD-WEATHER LOGGING

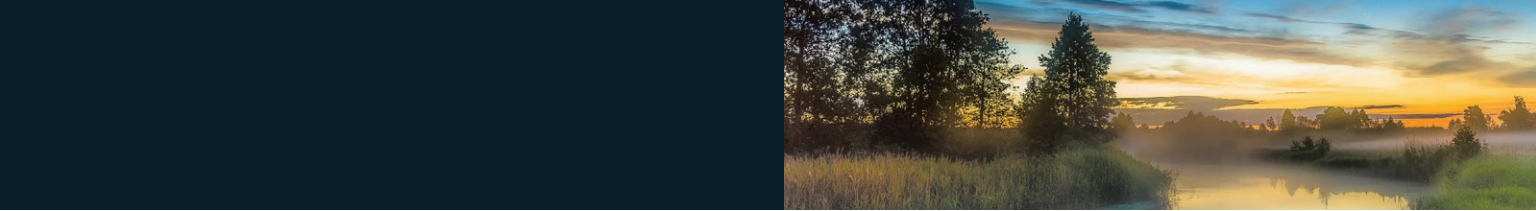
Join this panel discussion to learn about winter restoration techniques and how to use the conditions of the season to your advantage. Presenters Steven, Matt and Robb draw from a variety of experiences and will talk about techniques, helpful timelines, photo documentation, herbicide use and considerations, and winter brush burns. Equipment advice such as using brush hogs, chain saws, and even grant-funded excavators equipped with forestry mulchers will be covered. Presentations will focus primarily on shrub control for natural areas including fens, bogs, wet meadows and upland sites as well. Plenty of time will be allotted for Q&A and broader group discussion and sharing.

Steven Parrish, University of Michigan Matthaei Botanical Gardens and Arboretum, Robb Johnston, Stantec & Matt Demmon, Feral Flora



CONFERENCE MAP





POSTER PRESENTATIONS



A Silent Killer: Chronicling the 20-Year Impacts and Progression of Beech Bark Disease in Michigan

Nick Zoller, Michigan State University

Additional Contributors: Dr. Deborah McCullough, Michigan State University

Are synanthropic songbirds good indicator species to facilitate early detection of environmental changes in natural areas linked to urbanization?

Cal Yackin & Jodee Hunt, Grand Valley State University

Birds vs. Cows: Impacts of regenerative grazing practices on grassland bird reproduction and habitat quality

Jennifer L. Shamel & Sylvan K. Gilkey, Earlham College

Additional Contributors: Hannah K. Grushon, Nathen G. Peck, Jaime J. Coon, and Wendy P. Tori, Earlham College

Black ash persistence 15 years following emerald ash borer invasion in southeastern Michigan

Hilary Emenheiser, Wayne State University

Additional Contributors: Samantha Chauvin, Michigan Department of Environment, Great Lakes, and Energy; previously Wayne State University and Daniel Kashian, Wayne State University

Coalesce: Art and Science Collaborations in Research and Pedagogical Practices

Sharon Gill & Jacklyn Brickman, Western Michigan University

Communities of native Cerambycidae in urban and forested settings

Paige Payter, Michigan State University

Additional Contributors: Dr. Deborah McCullough, Michigan State University

Dealing with Invasive Species on Michigan State University's Campus

Alaina Maniscalco, Michigan State University

Additional Contributors: Carolyn J. Miller, Beal Botanical Garden & Campus Arboretum, Michigan State University

Dreamscapes: A Great Lakes Triptych

Glenn Wolff, Northwestern Michigan College & Lynne Heasley, Western Michigan University

Hormetic Dose Response to herbicide in a ubiquitous wild plant

Anah Soble, University of Michigan

Additional Contributors: Regina Baucom, University of Michigan

How Beal Botanical Garden is Collecting Pollinator Data

Loren Campbell Michigan State University

Additional Contributors: Carolyn J. Miller, Beal Botanical Garden & Campus Arboretum, Michigan State University

How do plant functional traits for restoration vary by seed producers and geography?

Sean Ward, Michigan State University

Additional Contributors: Riley Pizza, Michigan State University

Investigating Sources of Microplastics and Effects of Plastic Pollution on Biofilm Function in the Huron River

Sadie Baker, Eastern Michigan University

Is there hope in the ashes? Impacts of emerald ash borer on tree regeneration in Michigan's black ash forests

River Mathieu, Michigan State University

Additional Contributors: Dr. Deborah McCullough, Michigan State University

Preliminary inventory of the aquatic earthworms [Naididae (Naidinae and Tubificinae)] in the Huron River

Rob Sulewski, University of Michigan

Additional Contributors: Dr. Kristin Judd, Eastern Michigan University

Prioritizing a healthy landscape: Determining the percent of farm property covered by native species

Alyssa Mollema, Michigan State University

Additional Contributors: Summer Ragosta, Danielle Kruse, and Susannah Cooper, Trout Lake Farm, LLC





Regenerative Ranching: Analyzing the impact of rotational grazing practices on Pasture Health and Biodiversity

Kelly Benoit, University of Michigan

Switching Gears Toward Recreation: Impacts of Mountain Biking Participation and Amenities Development on Local Communities and Terrains

Elizabeth Perry, Michigan State University

Additional Contributors: Allison McCurdy & Hunter Lee, Michigan State University; Emily Reinhardt & Kim Coleman, SUNY Plattsburgh; Bob Dvorak, Central Michigan University; Jessica Leahy, University of Maine; and Sonia Sachdeva, USDA Forest Service

The effect of small dams on ecosystem metabolism in the Huron River

Kai Garcia, Eastern Michigan University

Additional Contributors: Dr. Kristin Judd, Eastern Michigan University

The effects of dams on benthic macroinvertebrate species abundance and assemblage upstream and downstream of the Peninsular Park dam in the Huron River

Raelyn Maroney, Eastern Michigan University

Additional Contributors: Dr. Kristin Judd, Eastern Michigan University

Tree survey of Cornerstone University's campus 2023

Skye Fitzgibbon & Laura Matamoros, Cornerstone University

Additional Contributors: Justin Burdine, Cornerstone University

Viburnum Leaf Beetle (*Pyrrhalta viburni*): An emerging threat to native *Viburnum* species in West Michigan

Julie Batty, Blandford Nature Center

MONDAY EVENING ACTIVITIES

WATER CEREMONY

5pm, East Patio

Join us as Panoka Walker leads us through this traditional practice that continues to be a deeply cherished and meaningful part of our annual gathering. You will be guided through the mental, physical, and spiritual connection to water as we collectively honor this sacred gift through song, movement, and contemplation. As we dedicate our lives to the betterment of the natural world and connections with one another, we take this time to appreciate water's role in the universe, flowing endlessly through ourselves and everything around us. "When a prayer is said and a song is sung, the water becomes sacred, and can heal body, mind, and spirit." The ceremony takes place outside on the east patio, so please dress warmly! Photography is prohibited during the ceremony, and we ask that you please take the time to silence your phone before entering this shared space.

NOCTURNAL SCIENCE IN THE GREAT LAKES REGION

7:30pm, Red Cedar Room

In all our stewardship and restoration of natural areas, it's easy to forget the way the world changes after the sun sets. Whether for additional data collection or as unique community engagement events, surveying natural areas at night can provide a wealth of information that would otherwise be missed or ignored. This presentation will focus on bats, owls, and flying squirrels, including techniques and tricks for acoustic surveying of bats and owling methodology. We will also dive into the basics of astronomy, including picking an observation site, major constellations and noteworthy astronomical objects, and how to find things in the sky from the Great Lakes region.

Ian Ableson, Six Rivers Regional Land Conservancy





Keep in touch, friends, and we'll see you again in 2025!