



**How will we remember the early 2020s?  
COVID-19, record heat, drought, rain, flooding? No!  
There is a better way to remember these years...**

## **Revitalizing Times for the Lakeshore Nature Preserve!**

By Rhonda James, PLA, ASLA, Senior Landscape Architect

Right on the heels of the Preserve's Strategic Plan, the Preserve has engaged stakeholders and worked with our consultant to update the 2006 Lakeshore Nature Preserve Master Plan. So far, there have been two public meetings, online feedback opportunities, small group discussions, and countless interactions between staff and consultant. Detailed discussions will continue regarding plant communities in the Preserve as well as facilities that best support education, research, and outreach on campus. In the end, the master plan update will serve as a guidebook for where facilities and vegetation plant communities should head, both in the short term and the long-term—as taking vegetative communities to a healthier balance takes many years.

In the next few months, the planning team will come back to the public with a revised set of recommendations in response to what we have

heard so far, including input from local conservation and restoration experts regarding their experiences with similar efforts. Urban natural areas face many challenges, and the Preserve aims to be an example of respecting the land and culture.

**Watch for public meeting announcements via email and on the [Lakeshore Nature Preserve website](#).**

A Preserve Outreach Center! Yes, the Preserve is beginning planning to determine how a new building and its site can serve as an inspiration to our community as a sensitive construction on the land now and into the future. The building is expected to house Preserve operations and serve as a starting point for visits to the Preserve with public restrooms. A study will investigate the best location for the

building and how the building can be as self-sufficient as possible. When the study determines the preferred options, an environmental impact study will be completed. Goals for the building and its site are ambitious and exciting. This fall, the Preserve will be working with a consultant on this project and will bring it to a series of public information meetings, separate from the Master Plan Meetings.

The Preserve Outreach Center Advanced Plan is a detailed study looking at all the logistics of a new building and how it relates to everything in the area. The Master Plan Update looks at the entire Preserve on a more generalized scale, so it is necessary to separate the efforts. There will be many meetings this fall but your participation is vital on both planning efforts! The Preserve staff will be busy requesting your input, and we certainly are looking forward to the conversations.

## **Picnic Point Entry Gates Reinstalled**



After nearly seven years the iron gates, part of the iconic stone entryway to Picnic Point, have been refurbished and reinstalled.

The gates are part of the entryway constructed in the 1930s under the direction of then property owner Edward Young. Stones were collected from around southern Wisconsin and the diversity of rock specimens make it an [ideal teaching aid for geology students](#).

The project, involving lead paint removal, repainting, and installation was made possible through gifts to the Preserve Stewardship Fund at the [University of Wisconsin Foundation](#).

## First Preserve Director Gary Brown Retires

After a 38-year career with the University of Wisconsin, Preserve Director Gary Brown is retiring. His last day on campus was Friday, June 3, 2022.

In all, Gary spent 43 years at the UW including his undergrad years (in the Marching Band!), 15 years at UW System traveling our great state, and the last 23 years at UW-Madison leading campus planning & landscape architecture activities. Since 2010 Gary also served as the Director of the Lakeshore Nature Preserve.

The Lakeshore Nature Preserve team will temporarily join the UW-Madison Office of Sustainability. Dr. Missy Nergard, Director of the Office of Sustainability will provide oversight of the Preserve in an interim capacity.

Preserve Assistant Director Laura Wyatt will continue to manage the Preserve's day-to-day operations. If you have any questions on how to work with the Preserve during this transition, please contact her at [laura.wyatt@wisc.edu](mailto:laura.wyatt@wisc.edu) or 608-265-9275.

We asked Gary to reflect on his tenure and on where the Preserve is headed...

As the Preserve's inaugural director starting in 2010, and a long-time supporter of this amazing resource, I look back on my tenure with great pride and sense of accomplishment. In the early 1980s I first visited the Preserve as an undergrad in a required Soil Science course reviewing the historic soil pits to understand soil horizons and textures. Later I would visit with Professor Evelyn Howell to understand the devastating encroachment of invasive species and how to design for ecological restoration. Little did I know then I would become the outspoken leader for these cherished lands.

My how things have changed in 40 years! Today we have a complement of professional staff successfully

managing these 300 acres fulltime. We have thousands of volunteers, faculty, staff, students and avid community members helping us preserve this outdoor teaching and research laboratory for generations to come.

I'm happy we have a strong Preserve Committee, an on-going transparent process for annual work plan and operating budget development, and strong philanthropic support to supplement

state and university funding. We've come a long way over these many years and set the stage for the ongoing protection of the Preserve by fully supporting the university's mission of teaching, research, and outreach.

I also am extremely pleased that we are moving well through the update of the Preserve Master Plan based on our previously completed Strategic Plan and beginning our advance plan for the Preserve Outreach Center, a long-discussed home for the overall Lakeshore Nature Preserve program and staff. I look forward to helping as a volunteer and donor representative on this important project. As I leave my role as director, I leave the Preserve in good hands moving forward, building on our strong foundation and preserving the Preserve.

We wish Gary the very best in retirement!



Gary Brown retired after serving as the Preserve's Director for 12 years.

## Preserve Embodies University Commitment to Sustainability

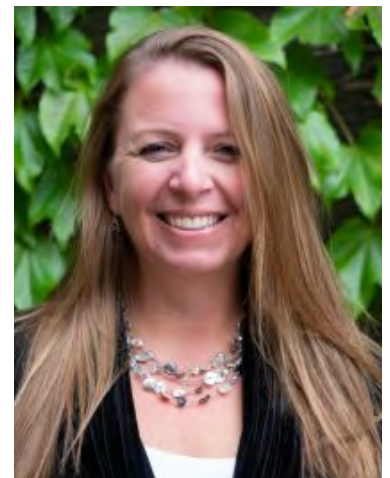
By Missy Nergard PhD, Director of Sustainability

I first recognized the importance of nature in education when I was obtaining my undergraduate degree at UW-Stevens Point. The campus' 280 acre preserve (Schmeekle Reserve) was a significant part of my college experience for classes, recreation, and respite. The Lakeshore Nature Preserve plays that role for our Badger community, and it has been well stewarded by Gary, the Preserve staff and students, and countless community members.

When I first arrived in 2018 Laura, Adam, and Bryn treated me to a "backlot tour" of the Preserve. It was amazing and I left the woods, and their company, feeling enchanted and grateful. I am humbled to now be a part of the Lakeshore Nature Preserve team, and I am honored to follow in Gary's footsteps.

Both Gary and the Preserve played roles in my joining the University as the institution's first full-time director of

sustainability. They exemplified the expertise of the faculty and staff, the commitment to respect and honor history, and the focus on our central mission of education and research. The Preserve and its stewards continue to teach me, restore my soul, and spark my curiosity. The Lakeshore Nature Preserve is the embodiment of the University's commitment to sustainability.



Dr. Missy Nergard, Director of Sustainability, will provide oversight to the Preserve.

## Generous Donors Support Student Applied Learning and Careers

By Bryn Scriver, Preserve Volunteer & Outreach Coordinator and Laura Wyatt, Preserve Assistant Director

This summer the Preserve is fortunate to have four enthusiastic and hardworking student Natural Area Assistants. Under the tutelage of Preserve staff, they are learning plant identification skills, vegetation management techniques, and how to use the tools of the trade like brush saws and mowers, herbicide applicators, drip torches, and water pumps. They are also instrumental in maintaining a safe and clean facility by conducting daily checks of fire circles, signage, trails, and benches.

Each of the Natural Area Assistants are students of environmental studies, and working in the Preserve is providing real-life, applied experiences to compliment what is learned during seat-time in the classroom. Committed donors to the Preserve provide the funding for these paid work experiences. Our thanks to Preserve Stewardship Fund donors and to a special anonymous donor supporting a focus on invasive species removal and management.

In 2022, we celebrate the inaugural award of the "E. David Cronon Stewardship Fellows of the UW-Madison Lakeshore Nature Preserve." The award is a result of an endowed fund generously created by the Kelly Family Foundation with the intent to support UW-Madison undergraduates working with the Preserve managers on stewardship, research, and interpretation to benefit the Preserve.



Lily Shayegan is a junior from Stillwater, MN majoring in Environmental Studies with an emphasis on Land Management and Geography. She is interested in managing land for recreational use in addition to restoring native plants. When asked what she enjoys about working here she said, "I love seeing all of the unique bird species, especially the Sandhill Cranes...I also discovered that I

like working with volunteers and helping them to connect to the natural world."



Nick Wandschneider is a senior from Kohler, WI studying Conservation Biology and Environmental Studies. He is specifically interested in invasive species that can pose a threat to native species and habitats. When asked why he wanted to work in the Preserve Nick responded, "Having an entire nature preserve on campus is a luxury that many schools don't have, and I wanted to help protect it." Nick enjoys discovering new plants and animals each day he comes to work.



Max Derleth is a senior from Eau Claire, WI studying Botany. Max wanted to work in the Preserve to gain hands-on experience with natural areas management and because, "There's no other place on campus I'd rather spend my time." Max said his favorite part of the job so far is getting to explore off-trail areas of the Preserve that he wouldn't get to see as a recreational visitor. He is also fascinated by the different species of fungi that he's encountered while working.



Ben Kotte is a senior from Oak Park, IL majoring in Environmental Science who has been working for the Preserve since Spring 2021. Ben has provided guidance to his newer co-workers, and he has the additional duty to manage the Picnic Point visitor counter data. In addition to learning about new plants and animals, Ben has enjoyed seeing how the Preserve changes over the year and how his work influences the landscape.

## Preserve Celebrated Sandhill Cranes with Eagle Heights Families



On Saturday May 7, Preserve staff and volunteers teamed up with Assistant Director of Resident Support Services Andrew Werner to engage at least 36 families with children from Eagle Heights Apartments to learn about Sandhill Cranes with a show and touch table, origami crane making, coloring pages, a nature scavenger hunt, and a book giveaway.



Each family received a copy of the children's book *Sandhill Crane Siblings Learn to Find Food* by Joy Zedler, UW-Madison Professor Emerita. Dr. Zedler, an internationally recognized expert on wetland restoration, donated the books to local conservation organizations because she wants young people to know how special wetlands are for cranes and people!

## Grants Support Student Engagement in the Preserve

By Laura Wyatt, Preserve Assistant Director

The Lakeshore Nature Preserve Committee awarded four grants made possible by the Academic Endowment Fund of the Preserve, established by former faculty members, Robert M. Goodman and Henry Hart. The maximum individual award was \$1,000. Winning proposals were selected in part based on the degree of student engagement and scientific, educational, or applied value.

The **Audubon Society, UW-Madison**, a campus chapter of the National Audubon Society, led by student President **Sydney Stroschein**, working with advisor Dr. Anna Pidgeon, was awarded funding to build and place 5 Tree Swallow nest boxes in the Picnic Point Marsh. Tree Swallow populations have decreased in size by approximately 49% between 1966 and 2014 from habitat loss and climate change. Students plan to install the boxes in Fall 2022 then monitor them as part of their popular student-led birding hikes.

**Amanda Shalit**, an undergraduate student working with Professor Ellen

Damschen and mentor and PhD candidate Stephanie McFarlane, was awarded funding to use the Biocore Prairie to test if bumble bees are visiting flowers with higher pollen protein to lipid ratios (P:L). She wants to know how bumble bee foraging habits change over the course of a colony's life cycle. Knowing how bee nutritional needs change over time and which plants best fill these needs is crucial in helping protect the Rusty Patched Bumble Bee and other threatened populations.

Lecturer **Noreen McAuliffe**, was awarded funding to work with undergrads in her Fall 2022 Environmental Studies capstone course, *Environmental Writing and Place*, to practice site-specific writing and place-focused research in the Lakeshore Nature Preserve. The research and writing will culminate in a group project in which students investigate the lesser known places and stories of the environment on campus and then design a GPS self-guided audio walking tour of these sites.

**UW Hooper Ambassadors**, led by students **Isabel Peterson**, **Kayla Dutton**, and **Isabelle Paulsen** with advisor and Outdoor UW Director David Elsmo, were awarded funding to help support *All Out!* a Hooper Ambassadors event for students with, (1) minimal experience with outdoor recreational activities, and (2) barriers accessing the outdoors or outdoor recreation activities on their own. Scheduled for Spring 2022, the *All Out!* event featured an array of activities including skills workshops (e.g., how to build a fire and pitch a tent), a hike, and a discussion on ethical outdoor recreation.

**Any student, faculty, or staff member at UW-Madison may apply for a Lakeshore Nature Preserve Student Engagement Grant as long as it benefits undergraduate students. A request for proposals will be announced in late 2022 with a deadline of March 1, 2023. To learn more, contact Laura Wyatt, Assistant Director, at [laura.wyatt@wisc.edu](mailto:laura.wyatt@wisc.edu).**

## New Bench Memorializes Heidi Dvinge

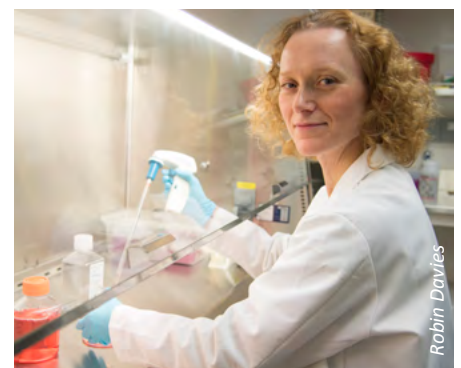
By Megan McKeon and Josie Mitchell, UW-Madison PhD students

In the Fall of 2021, students in the biological sciences community organized a fundraiser for a memorial bench in the Lakeshore Nature Preserve to honor the memory of Heidi Dvinge. Heidi was an Assistant Professor in the School of Medicine and Public Health who tragically passed away in September of 2019. Since starting her lab in 2017, she contributed to the scientific community at UW-Madison by focusing on how misregulation of RNA processing contributes to the progression of cancer.

An astonishingly creative scientist, Heidi brought enthusiasm and warmth to all those who had the privilege of working with her. She will be remembered for her relentless pursuit of discovery and for her dedication to her mentees along the way. In addition to her indelible academic impact on the university, Heidi was a generous, empathetic, and understanding mentor for her students.

Heidi loved biking and running along Lake Mendota, so we decided a bench overlooking the lake would be the best way to memorialize her legacy. In addition to the faculty and students at UW-Madison, we reached out to her friends from her previous institutions and found resounding support. Donations towards her bench came in from around the world, a true testament to her impact on everyone she met.

**For fellow friends, Badgers, visiting scientists, and newcomers to Madison, may this bench serve as a sign of welcome from a person who best represented both the ideals of this institution and the serenity of the land in which it resides.**



Students raised donations from around the world to fund a memorial bench in the Preserve for scientist, teacher, and mentor Heidi Dvinge.



You can find Heidi's bench in the Preserve's Tent Colony Woods.

# Prairie Partners Internship Program—a Summer of Hard Work and Learning

By Adam Gundlach, Preserve Field Projects Coordinator

Five organizations, five interns, one summer of learning about natural areas management, and lots of hard work—this is what comprises the Prairie Partners Internship Program. The partnership, administered by Madison Audubon Society, employs a crew of interns to work at a variety of conservation areas throughout the greater Madison area (Goose Pond Sanctuary, Groundswell Conservancy, Pheasant Branch Conservancy, Cherokee Marsh, and Lakeshore Nature Preserve). The crew works one day a week for each organization, providing critical labor during the busy growing season, while gaining hands-on experience performing the work of ecological restoration amid a growing professional network.

Joining us this year are UW-Madison students Ella Tarpey (Conservation Biology), Emily Domnick (Forest & Wildlife Ecology), Lauren Stielow (Environmental Science), Rebecca Lennie (Conservation Biology/Landscape & Urban Studies), and Collin Cheney (Conservation Biology/Wildlife Ecology).

The job requires significant dedication. The crew wakes each morning, travels to the field site du jour (Thursdays are spent in the Preserve), and clocks a long day of field work, often with little in the way of shade or improved facilities. Then, it's time to head home, wash off the coating of a hard day's work, rest, wake and do it again.

native plant communities we seek to restore.

In addition to removing invasive plants, the interns help Preserve staff complete vegetation surveys to track management progress, collect seed to be sown in new locations, and maintain trails.

Throughout the summer, a cadre of experts provide educational enrichment introducing the interns to a range of topics including limnology, lichens, snake monitoring, fire ecology and prescribed fire, urban canid research, and the rich cultural history of the first nations peoples of the Dejevo region.

The Preserve is grateful for the ongoing support provided by the Friends of the Lakeshore Nature Preserve, who continue to generously fund the Prairie Partners crew each year.



Prairie Partners Interns (from left to right) Ella, Rebecca, Collin, Emily, and Lauren pause from removing buckthorn to pose for a photo.

The job exposes the crew to a broad range of considerations in the practical application of ecological restoration, but the main thrust of work focuses on the tools and techniques used to shape the diverse



Recent UW graduate and Friends of the Preserve President Will Vuyk explains his snake monitoring project to the interns.



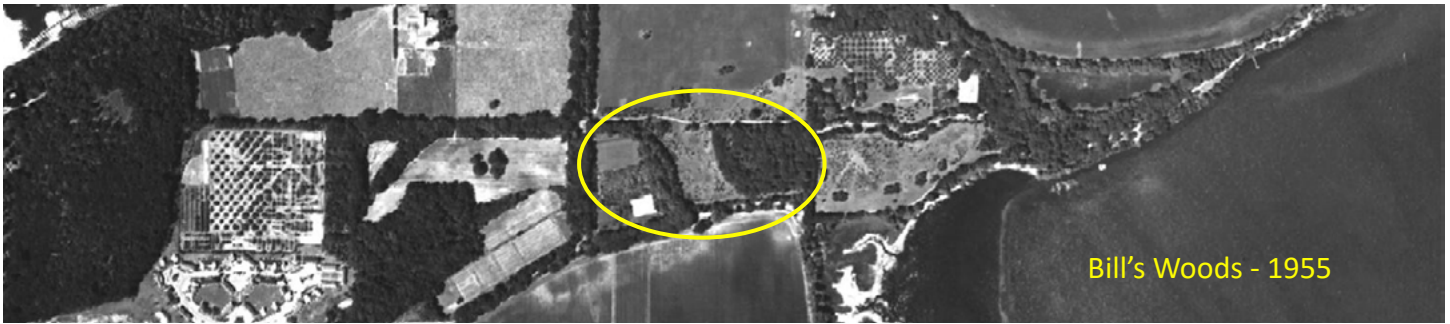
Emeritus Professor John Magnuson treated the interns to a morning of learning about limnology on a windy Lake Mendota.



Rebecca and Ella weed the Limnology Lab Native Plant Garden that was planted by the 2021 Prairie Partners interns.



Field Projects Coordinator Adam Gundlach instructed the Prairie Partner Interns and the Preserve Natural Area Assistants on prescribed fire ecology with live fire exercises.



Bill's Woods - 1955

## Management Spotlight – Bill's Woods: Past, Present and Future Opportunities

By Adam Gundlach, Preserve Field Projects Coordinator

The eastern section of Bill's Woods has long been a focus of management, with countless volunteer hours (this was one of the first Friends of the Lakeshore Nature Preserve project areas) to remove invasive brush and re-plant native species. As recently as 70 years ago, the now-wooded swath just to the west of the east Bill's Woods project area was open fields. The decaying nubs of formerly open-grown branches on large oak trees near the top of the hill point to the open savanna and woodland habitat that once existed here. While a pristine oak savanna is not likely to return, the young oaks and hickories mixed with cherry, ash, and elm in the central section of Bill's Woods form the bones of an open oak woodland in need of a little stewardship.

It is a good reminder of the open conditions, and habitat mosaic required for oak regeneration. The former field was a great place for young oaks to get established in full sunlight. The Preserve contains scant few examples of oaks, especially bur oaks, in a similar size and age class. Look in the understory now, and you will not find any new young oaks regenerating in areas that had closed in dense shade.

A dense tangle of honeysuckle and buckthorn was removed in the central section by volunteers and interns years back. In the intervening years, the cleared areas began to fill in with dense, young regrowth of those same species. Staff mowed approximately 2-acres of regrowth in fall 2021 and cut and piled larger-sized shrubs. A contractor crew from RES, Inc., treated resprouting stumps with herbicide in spring 2022. Additional follow-up will be needed to keep undesirable regrowth in check, while encouraging establishment of a diverse native groundlayer.

Ample oak and hickory leaf litter across much of the site provides great opportunities for prescribed fire management. Indeed, a burn was planned for the brush-mowed section in spring 2022, but weather and fuel conditions never quite aligned amidst a rather difficult burn season. When that first fire is completed, it will provide ideal conditions to oversee the site with a diverse woodland/savanna seed mix.

Hopefully, the fall 2022 burn season will provide an opportunity to complete a burn in preparation for winter seeding. In the not-too-distant future, this section of young oak woodland should be buzzing with an expanding cast of invertebrates bouncing between a multitude of floral delights throughout the growing season.



9/30/2021  
Prior mowing left and foreground,  
remaining thicket upper right

9/30/2021  
After mowing additional swath in  
upper right.

07/12/2022  
10 months following brush mowing and additional  
manual clearing. Aspen top down at photopoint.

Adam Gundlach

## Preserve Loses Trees to Storms

By Bryn Scriver, Preserve Volunteer & Outreach Coordinator and Adam Gundlach, Preserve Field Projects Coordinator

If a tree falls in a forest and no one is around to hear it, does it make a sound? We're not sure, but after a line of storms blew through Madison on June 13, you could hear the sound of buzzing chainsaws.

Following the storm that affected many parts of Madison and Dane County, Preserve staff responded to more than 30 downed trees impacting trails and visitor locations within the Preserve. It took just days for the Preserve's small crew to survey and clear the almost 12 miles of trails. Aided in part by visitor reports, the Preserve's four student Natural Area Assistants spread out to assess the damage then donned gloves, hard hats, and hearing protection to assist Field Projects Coordinator Adam Gundlach with the clean-up. The UW Grounds tree crew promptly handled trees that blocked commuters on the Temin Lakeshore Path.

During another storm on June 15, a large cottonwood along the Picnic Point beach trail was struck by lightning. The damaged tree top smoldered undetected for part of a day before an astute visitor noticed some small flames. Multiple Madison Fire Department and UWPD units responded, initially with only a fire extinguisher in tote... which wasn't quite going to do the job, so the Fire Dept's lake assault boat was called in. When Gundlach arrived on scene, there was a small battalion of police officers and firefighters enjoying the beach views, while the boat was spraying water on the burning crown of the cottonwood. There wasn't much in the way of wildfire pyrotechnics, though, just a tall tree with smoldering nooks and crannies that were difficult to extinguish. The bole of the

tree, with a large cavity and charred top, still stands and should provide good roosting and nesting habitat for a variety of critters.



Left: Fire and police units responded to a report of a cottonwood tree on fire in the Preserve.

Bottom: A UW Grounds tree crew member gets a great view of the Lake Mendota shoreline as he removes the damaged top of a lightning struck cottonwood.



## Nearly a Century of Soil Conservation

By Cole Koffran, 2021 Student Engagement Grant recipient and Lakeshore Nature Preserve Committee Member

If you often wander around the Preserve, you will find it no secret that erosion is a significant issue. Erosion, the process of soil or rock being removed from an area and being deposited somewhere else by water or wind, is an obvious problem faced by Preserve staff. You may have seen areas of the shoreline that are roped off because they are falling into Lake Mendota due to long term exposure to direct rainfall and wave action. This sight is a very palpable symptom of a long and storied past the Preserve and city has had with erosion.

Along the shoreline near Frautschi Point is a small, somewhat dilapidated, concrete structure stamped with "ECW 1935 SCS-WIS-11-153". According to Soil Conservation Service (SCS) records in the Wisconsin Historical Society Archives, this marking



Have you seen this concrete structure near Frautschi Point? It stands as a reminder of the early days of the Soil Conservation Service.

indicates the structure was built as part of the Emergency Conservation Work act in 1935 by a Wisconsin Chapter of the SCS. The "11" signifies the camp in Mt. Horeb that built the structure, and this was the 153rd job undertaken by the camp. The structure was built in order to



mitigate shoreline erosion by helping to reduce the velocity and thus erosive properties of the shoreline runoff, an issue we are still dealing with today. Remarkably, the structure even after almost a century has had a positive impact compared to the nearby area not protected by such a

Continued on page 8...

structure, an area that shows significant degradation since that time. While the slope preserved by the SCS has been upheld, the surrounding area continues to erode into the lake. Many people likely do not understand the purpose of this structure and what it has managed to accomplish.

These structures were commonly built by the SCS during their early years in the “Dirty Thirties” known as the Dust Bowl. More specifically, this is known as a grade stabilization structure. It allows water to run-off the surface of the soil directed towards the center lower wall, which would then act as a drop spillway; the drop spillway effectively reduces the amount of soil lost during a rain-storm. It is unlikely that there are any accessible records that describe why

this particular location was chosen to build such a structure either for research or to preserve a vulnerable portion of the shore. However, it can be safely said that it now stands as a monument to the early days of the Soil Conservation Service and the prominent role Wisconsin has played in the history of erosion control.

Indeed, Wisconsin has been a national leader in soil conservation since 1935 when it established the first large-scale erosion-control demonstration project in the Coon Creek Watershed in Vernon County. If you would like to know more about Wisconsin’s very storied and prominent past in conservation, check out [this document from Wisconsin Land and Water](#).

You may have spied other remnants of the past in the Lakeshore Nature Preserve.

An article in the online 2022 summer issue of [On Wisconsin](#) reveals the UW’s mysteries, secrets, and hidden places, including remnants of Camp Gallistella in Tent Colony Woods.



## Concerned About Water Safety? For Shore.

By Jeff Kirchman, UWPD Natural Areas Liaison Police Officer

Madison is blessed with four wonderful lakes offering untold opportunities to enjoy the water. The Lakeshore Nature Preserve allows easy access to the largest of the four, Lake Mendota, with a shoreline running from the Memorial Union Terrace to the neighboring community of Shorewood Hills. Warm weather makes the water pretty enticing, so it’s important to pay attention to safety where the woods meet the waters. Here are a few tips:

**Look, Don’t Leap** – The Preserve shoreline includes drop-offs and cliffs. Use caution when near these areas. Jumping from cliffs or swinging from ropes into the water are not only prohibited activities, they’re also highly dangerous. It’s often hard to determine actual water depth from shore; landing in the shallows or even a bad water-landing can cause injury.

**Save the Children** – Waterways and children can be a dangerous combination. Always pay close attention to children any time they are near the water. Even good swimmers can experience problems in unfamiliar waters.

**Be Weather Wise** – It pays to pay attention to weather forecasts any time you’re visiting a natural area. When near a shoreline, specific conditions such as high winds, excessive heat, and lightning can be true hazards. Avoid the area when hazardous conditions are predicted, or leave when they come up unexpectedly.

**Throw Some Shade** – Shores and beaches often feature a lack of overhead foliage. Sunburn is a real possibility, so make sure to protect your skin—for now and the future—by applying an appropriate sunscreen. Heat-related injuries are another concern on some of those sunny, sticky summer days.

**Algae** – An unfortunate side effect of both residential and agricultural development around all Madison lakes is the occasional blooms of blue-green algae. This type of algae has toxins that can be dangerous to people and pets. Avoid water that is significantly green, blue, or blue-green in color, has a ‘scum’ layer, or has puffy blobs of algae floating on the surface. For more information on blue-green algae precautions in the Madison area, check out the [Public Health Madison & Dane County website](#).

**Watch for Sharks** – Just kidding. The most dangerous aspect of the Lakeshore Nature Preserve shoreline is the water itself. Use caution, be prepared, maintain awareness, and your visit can be perfectly safe.

PLEASE NOTE: On campus, swimming is only allowed at the [Memorial Union Pier](#).

Jeff Kirchman, Campus Natural Areas Liaison Police Officer  
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# Blacklegged (Deer) Ticks and the Risk of Lyme Disease

By Dr. Susan Paskewitz, Professor Department of Entomology

*Ixodes scapularis*, officially known as the blacklegged tick but commonly called the deer tick, is the organism responsible for transmitting *Borrelia burgdorferi*, the bacterium which causes Lyme Disease (LD). The tick has 4 life stages: egg, larva, nymph, and adult. Ticks become infected with the LD bacterium by taking a blood meal from an infected host. Most often, this is a small mammal, like a chipmunk, shrew, or white-footed mouse. Each stage of tick usually feeds just once. Thus, a larva might feed on an infected mouse, and molt to become an infected nymph. A nymph might also feed on an infected animal (especially chipmunks, but also mice) and then molt to become an infected adult. In Wisconsin, the infection rate in deer tick nymphs ranges between 5-25% and twice that in adult deer ticks.



Susan Paskewitz  
Blood-fed deer tick nymph.

Part of the work in our lab is to estimate the risk of LD exposure in various settings, including around residences and in natural areas across the state. Deer ticks are very susceptible to drying out so they are most abundant in moist, shady locations, including pine and hardwood forests. However, we've often

found nymphs in grass lawns adjacent to woodlands, most commonly at the edge but sometimes in sunnier parts of the lawn.



Susan Paskewitz  
Postdoctoral vector biologist Dr. Xia Lee checks a "drag" for ticks.

The risk of LD exposure is typically measured using the density of infected nymphal ticks at a location. Nymphs are sampled by dragging a standard sized piece of white fabric across the vegetation for 750 meters according to CDC guidelines. We focus on nymphs for two reasons: 1) Nymphs are very small (about the size of a poppy seed), so they are much less likely to be perceived by their human host before they successfully transmit the bacterium (typically 24 to 48 hours); and 2) Nymphs peak in activity during late spring/early

summer, when humans are most likely to be active outdoors and come into contact with them. Conversely, adult tick activity peaks in early spring and late fall when people spend less time outdoors and are more "covered up". In Wisconsin, the peak activity time for nymphs is usually the third week in June until the first or second week in July. However, nymphs become active as early as late May and remain active as late as October in some years, so vigilance throughout the warmer months is required.

In 2012, a Lakeshore Nature Preserve volunteer acquired a deer tick in Bill's Woods. Our research team was able to

conduct sampling to verify that the ticks had indeed taken up residence in the Preserve, however at that time the deer tick numbers were very low. That might reflect a low density of deer in the Preserve, because deer are an important source of blood for adult deer ticks which process it for egg production. In the absence of deer, deer tick adults must feed on other medium to large mammals to sustain the population (coyote, fox, raccoons, opossums, skunks, and domestic dogs.)

**Although risk is still likely to be relatively low in the Preserve, there are precautions one can take to avoid tick bites:**

- **Tuck pants into socks or wear rubber boots while in wooded areas.**
- **Use an insect repellent.** In a recent field study, we discovered that deer ticks would readily attach to fabric that had been sprayed with DEET (bug spray), but 80-90% would drop off within 3 minutes. Treating clothes with the pesticide permethrin is also effective.
- **After being outdoors, take a shower** (use a scrubby to dislodge any ticks that aren't attached) **and do a thorough check for ticks.**

**You can help tick researchers! Download the [Tick App](#), a UW-Madison research project!**

**What is it about?** Lyme disease! And other things related to ticks: how to identify them, how to report them and, most importantly for the research team, it asks about your whereabouts and tick encounters.

**This is research?** Yes, and it also reminds you to check for ticks and take precautions to not get bitten!

**What do I need to do? How can I participate?**

1. Download the app (>18y old)
2. Complete the consent form and enrollment questions
3. Start filling in daily logs

**More information:** [www.thetickapp.org](http://www.thetickapp.org) or [tickapp@wisc.edu](mailto:tickapp@wisc.edu)

**What is in it for me?**

1. You have a free reminder to check for ticks
2. You can report a tick at any time
3. Your shared information helps to identify risk factors for ticks encounters and this will be used to develop better prevention strategies.

**Midwest Center of Excellence**  
VECTOR-BORNE DISEASE



## Biocore Bluebird Trail

By Jeff Koziol and Gisela Kutzbach, Friends of the Lakeshore Nature Preserve member volunteers

Eastern Bluebirds suffered major population declines with loss of native forests. During the 1980's the number of nesting pairs in Wisconsin had decreased to a mere 600. These losses have been reversed with the help of [Bluebird Restoration of Wisconsin \(BRAW\)](#). The organization developed successful bluebird box designs, locations, and predator controls.

The Biocore Prairie Bluebird Trail, with eight nest boxes, was established by the Friends of the Lakeshore Nature Preserve in 2014. A citizen science team of five Friends members maintains the trail and monitors the boxes weekly. Having a team of monitors enhances and broadens the learning experience. Data are tabulated on the [Friends bluebird project webpage](#). The Friends also offer fieldtrips on the bluebird trail and exhibit at the Eagle Heights

Community Garden Seed Fair, spreading understanding and love for bluebirds and other songbirds.

Over the years, we have adjusted the trail by moving boxes away from the woods edge, where House Wrens

tend to drive out bluebirds, and by increasing distance between houses. An ongoing problem is House Sparrows attacking and driving out bluebirds. Tree Swallows also successfully compete with bluebirds over the coveted cavities afforded by nest boxes.

Wisconsin. Last year, only three bluebirds fledged from the trail boxes. In Wisconsin, the number of fledged bluebirds decreased by more than a third (BRAW newsletter summer 2022) to just over 12,000. During that season, Tree Swallows took advantage of the lack of bluebirds and increased their numbers by 30%.



The cold springs of the last two years have delayed and greatly reduced the insect population. Insectivores and early spring arrivals like bluebirds end up starving while late arrivals like Tree Swallows are able to find food. This spring, of a first batch of five eggs in box #5, none survived. The current count along the trail stands at 5 bluebirds and we hope for another breeding still.

Regional weather conditions during critical stages of breeding have become progressively worse. Both

bluebirds and Tree Swallows are challenged by climate change, which causes changes in weather conditions and food scarcity during critical stages of breeding.

While we have celebrated successful years in the past, the 2020 and 2021 seasons were disappointing. Bluebirds overwintering in great numbers in Texas died massively during a severe winter storm and during two successive cold springs in southern



Volunteer Jeff Koziol opens a bluebird box during a Friends of the Preserve field trip.



A male and female bluebird guard their nest box.



Five hungry nestlings, just 2 days old, in nest box #5.



The 2022 Day of the Badger fundraising event on April 5-6 was a success thanks to donors who pushed us past our fundraising goal with \$4,740, enabling us to receive a \$4,000 challenge match from the Friends of the Lakeshore Nature Preserve! We received 61 gifts, up from 50 in 2021!

The \$8,740 raised will go to support the Preserve's ongoing mission of teaching, research, and land stewardship.

**You can support the Preserve anytime!**

Visit [supportuw.org/giveto/lakeshore](https://supportuw.org/giveto/lakeshore)

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**Lakeshore Nature Preserve**

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