University of Wisconsin-Madison FACILITIES PLANNING & MANAGEMENT

Lakeshore Nature Preserve

E-Newsletter

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SUMMER IN THE PRESERVE (clockwise from top left): Natural Area Assistants César, Ana, and Parker with a truckload of invasive dame's rocket, an eastern tiger swallowtail on sweet Joe-Pye-weed, Sustainability interns greet the Big Oak, Natural Area Assistants Ana and Soleil measure tree diameter, a hairy-banded mining bee on grass-leaved goldenrod, three first-year student volunteers at Bucky's Big Event on Picnic Point, Prairie Partners intern Krister mows down weedy Canada goldenrod, a tube slime mold (Stemontis species).

Preserve Updates for a New Season and New Semester

By Laura Wyatt, Preserve Interim Director

Any day is a great day for a walk in the Lakeshore Nature Preserve, but early fall is exceptional! The Biocore Prairie hosts a diverse palette of flowering forbs scattered among majestic grasses. Birds are migrating, and insects and other animals are busy preparing for the change of seasons. A kaleidoscope of color has begun to creep across treetops.

Preserve staff and stakeholders are also busy supporting the approval process for the Master Plan and continued planning for an Outreach Center. The Master Plan Update is awaiting final review and approval by the Preserve Committee and Facilities Planning & Management (FP&M) administration. An Outreach Center Plan was completed by The Kubala Washatko Architects thanks to a generous million-dollar gift from W. Jerome Frautschi. University administration and Mr. Frautschi are currently reviewing initial plans. The proposed site for the 10,000-square foot Outreach Center is west of the main Picnic Point entrance, outside of the historic stone wall, on land that has already been disturbed by the existing parking lot, roadway, and ped/bike path. The project avoids known archaeological sites and would showcase sustainable design and building principles. If approved, the next steps are construction plans, final reviews, and approval.

In 2022, the Preserve was aligned with the Office of Sustainability. This change supports the reality that the Preserve serves as an integral part of UW academics and a key factor of campus sustainability. In partnership with the Nelson Institute for Environmental Studies, two postdoc positions have been created that will support campus sustainability and future natural area restoration in the Preserve through surveying and monitoring.

The first position will design and implement an academic study of UW-managed lands (starting with the Preserve) to document natural capital assets, quantify ecosystem benefits, and estimate emissions reductions towards meeting or exceeding net-zero carbon goals by 2048 or sooner.

The second position will develop a methodology and conduct an assessment for areas of biodiversity importance including main campus and select outlying lands at least every other year. The project will also identify vulnerable ecosystems and species on campus and prevent, manage, and/or remediate damage to natural habitats and sensitive

Please know that your support is important in assisting the Preserve reach its potential.

Student Engagement Grant Supports Student Project to Benefit Tree Swallows

By Trenton Bauer, President, Audubon Society at UW-Madison

A Lakeshore Nature Preserve Student Engagement Grant provided financial support for the Audubon Society at UW-Madison (ASUM) to install five tree swallow nest boxes in the Picnic Point Marsh this spring. Referencing research from other institutions, the club developed plans for the construction and placement of the boxes, ultimately aiming to secure to the species' ability to persist as a robust population despite the threats posed by climate change, urban sprawl, and non-native competitor species like house sparrows. ASUM installed the boxes on April 2nd of this year, with a large portion of their membership helping in some way during installation. In less than a month, ASUM began receiving reports of tree swallow habitation in four out of the five boxes.

The project has relied on over a dozen ASUM members' involvement at some stage, and it continues to depend on citizen science. ASUM plans to develop a long-term dataset based on reports from users of Picnic Point which may

eventually be used to gain insight on brood success and predator deterrent effectiveness.

We need your help! Users of Picnic Point are encouraged to report their observations (tree swallow and other species' use of the boxes, evidence of predators on and around the boxes, damage to the boxes, etc.) using ASUM's reporting form, which can be found under "Tree Swallow Nest Box Reporting" at audubonuw.org.

This is ASUM's second time receiving a Lakeshore Nature Preserve Student Engagement Grant, using the previous grant to fund the purchase of binoculars for their popular fall educational bird hike series, which has attracted hundreds of students over the last two years.

To learn more about ASUM and it's projects contact ttbauer@wisc.edu or audubonsocietyuw@gmail.com.







Left to right: ASUM members attach predator guards to boxes; Students prepare to install nest boxes at Picnic Point Marsh; Swallows investigate the new nest boxes.

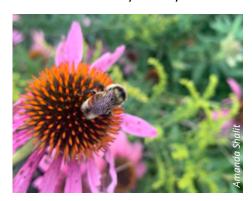
Student Engagement Grant Funds Exploration of Bumble Bee Foraging Patterns

By Amanda Shalit, BS'23 Botany, Conservation Biology, Environmental Studies

Global pollinator declines have devastating economic and environmental repercussions, such as shortages in food supplies and decreased ecosystem biodiversity. Restoration projects can be used to stabilize pollinator declines by providing abundant floral resources across the growing season. Bumble bees (Bombus spp) are prolific generalist pollinators that provide important pollination services in both natural and agricultural systems.

Previous research has shown that bumble bees prefer foraging on pollen that has a high protein-to-lipid ratio (P:L) in experimental situations. This research suggests that bumble bee abundance will be higher in areas with higher community pollen quality, which preliminary data confirms. However, we have yet to document whether bumble bee visitation is higher on plants that have high P:L than on plants that have low P:L. Here, I

ask (1) if bumble bees in their natural habitat visit flowers with a higher P:L more frequently, and (2) if bumble bee foraging habits change over the course of the colony's life cycle.



From May to August 2022, I conducted transect-based field surveys at restored prairies across southern Wisconsin, including Biocore Prairie in the Lakeshore Nature Preserve, to determine available floral resources

and subsequent visitation rates, collecting data on how often bumble bees were seen pollinating different species. Pollen samples from the same sites were assayed to find P:L.

Our preliminary analyses show a positive correlation between floral P:L and bumble bee visitation during the summer. We expect a reversal of this pattern in the spring; bumble bee queens likely seek out higher lipid concentrations as they emerge from overwintering and begin to forage to support themselves and their new nest. The knowledge gained from this research can be used to tailor restoration methods and seed mixes towards benefiting bumble bee populations by ensuring that restored sites provide nutrient-rich pollen across the lifespan of the colony.

A Gift for a "Gift"

By Bryn Scriver, Volunteer & Outreach Coordinator

Preserve staff have heard over and over from students. staff, and community members that the Lakeshore Nature Preserve is invaluable for respite and well-being on the **UW-Madison** campus.

This was starkly illustrated when we were recently contacted about how to make a donation by Meagan, a Dane County farmer and mother of three. She wanted to give a gift in memory of her daughter Masey, who passed away this spring at the age of 5, after a 2½-year-long battle with a rare form of cancer. Masey received care at the American Family Children's Hospital, and the nearby Lakeshore Nature Preserve turned out to be a key part of Meagan's self-care.

"A cancer diagnosis turns your world upside down," explained Meagan. As a dairy farmer she is outside a lot, and feels strongly connected to nature. She also loves to exercise. "So when we were inside those hospital walls for so long, I just felt like I wasn't myself. I couldn't think. I didn't have my normal space to process things."

About 1 week into Masey's first 31 days of inpatient care a hospital employee asked Meagan if she'd seen the trails behind the

hospital and handed her a map of the Lakeshore Nature Preserve. Meagan said she had always wanted to visit Picnic Point, although she'd never taken the time to look up exactly where it was. When the map she was holding said "Picnic Point" she thought, "This is perfect"!

A few nights later, when she had someone sitting with Masey, Meagan decided to try to make it out to the tip of Picnic Point. She said, "I'll never forget that first run out there. It just provided so much clarity to me. I was able to leave everything out on the trail and come back in renewed and ready to pour all my energy back into Masey."

"For a while I just took the path to the tip of Picnic Point. But eventually I started getting more brave and veered off on different paths. But the path to Picnic Point became my favorite. I could run it with my eyes closed."



A recent donation was made in memory of Masey who, according to her mom, was rambunctious, spunky, and strong-willed. She loved helping on the family farm, including milking the cows. She also loved to paint and draw and just spend time being silly with

Every time they were back at the hospital, including when Masey needed 45 days of radiation treatments and spent long periods of time under anesthesia, Meagan ran in the Preserve. "It was truly a time when I could either sit on my hands or get out and connect with something that I knew would bring me joy."

"When your child is going through something like this there is so much going on in your mind." Meagan said running in the Preserve, "gave me time not to think about the cancer...I was able to finally put everything outside of my mind and only focus on me for 40 minutes."

She added, "I saw every single season out there. I saw different birds. I saw the butterflies come and go. I saw students doing art classes out there. It was so cool."

Meagan decided she had to give back to the Preserve. "I hope everyone takes advantage

of this place. It is such a gift."

If you want to support the Preserve as a place of respite and well-being, gifts can be made through the Wisconsin Foundation at <u>supportuw.org/giveto/lakeshore</u>.

You can also make a donation in Masey's name to the Pleuropulmonary Blastoma (PPB) Registry to support future research or the Child Life program at the American Family Children's Hospital.

New "Poetry in the Preserve" Audio Trail

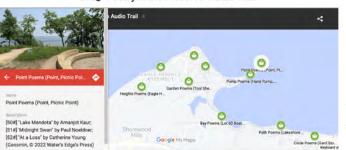
Ten new stops have been added to the Preserve Audio Trail featuring 24 live recordings of poetry performed by the authors at the Friends of the Lakeshore Nature Preserve's annual "It's in Our Nature" poetry open mic events.

Stroll the Preserve and listen to the poems in some of the places that inspired them. Poems can also be read or listened to on-line on the Friends poetry web page.

A big thank you to Friends of the Lakeshore Nature Preserve President Will Vuyk for his time and effort to make the poetry trail possible, from selecting the poems and adding them to the audio service to creating signs for the new stops.



2023 "Poetry in the Preserve" Audio Trail



A Summer of Transitions and Enlightenment

By Maurisa Perez, BA'23 Environmental Studies and Prairie Partners Intern

I have an interest in connecting disadvantaged and minority communities with the environment. Whether that manifests in education or in hands-on experience in the outdoors, I want to be someone who can help foster

that relationship in a safe, judgment-free space. As a queer woman who comes from a lower socio-economic household, as well as having an unconventional body type, I felt that it was important for me to cultivate and nurture this interest throughout my undergraduate career. I know how hard it is to create a positive relationship with the environment, rural or urban. I successfully am growing with that mentality into my post-college career.

After graduating from UW-Madison last spring, I accepted a position as a Prairie Partners intern. I applied out of my interest in conservation fieldwork, and the noteworthiness of the internship, which I heard about frequently throughout my schooling.

The internship has been immensely eyeopening for my own personal outlook on conservation. In academic and policy making spaces, I felt I had an idea of how ideas were implemented in sites like the Lakeshore Nature Preserve. Now I've been given the opportunity to

observe and partake in the reality of how these abstract conservation strategies and perspectives work on the ground.



The 2023 Prairie Partners intern crew, (L to R) Krister, Katie, Maurisa, Paul, and Emma, poses in front of the Purple Martin house.

I've also enjoyed the educational opportunities offered by the Lakeshore Nature Preserve with guest speakers on a variety of topics. I was particularly interested in a talk by Wisconsin Department of Natural Resources ecologist Paul White who shared how research is being conducted in the Preserve and elsewhere on bats and White Nose Syndrome. On another occasion we joined Biocore Lab Manager Seth McGee to count Purple Martin eggs. It was a surreal experience to interact with a bird that will fly to South America this fall.

The Prairie Partners internship has benefited me immensely, and I have met some of the most capable and intelligent people through this opportunity.

A crew of 5 Prairie Partners interns work 1 day a week for 12 weeks over the

summer with five participating organizations. The Friends of the Lakeshore Nature Preserve have funded the interns participation in the Lakeshore Nature Preserve since 2007.



Leaf It Behind

By Jeff Kirchman, UWPD University Natural Areas Liaison Officer

When you leave a beautiful place, you carry it with you wherever you go.

That's a nice sentiment from author and lifestyle philosopher Alexandra Stoddard. But, when it comes to visiting the Lakeshore Nature Preserve, please don't take it literally.

The Wisconsin State Legislature felt strongly enough about this that they wrote a law to cover it. Under UWS 18.06(1): No person may remove any shrubs, vegetation, wood, timber, rocks, stone, earth, signs, fences, or other materials from university lands, unless authorized by the chief administrative officer.

Why such a strict attitude about grabbing a neat rock, collecting a particularly interesting piece of driftwood, or foraging for edible plants? Several reasons, actually:

It's in the name; as a nature preserve, the area is set aside to preserve the natural beauty and order of the land. Unauthorized removal of anything detracts from that guiding mission.

- A little can lead to a lot. When one person is witnessed taking something, it lowers the bar for others to do likewise.
- That downed tree cut up for firewood is no longer available to wildlife, plants, fungi and more for food and shelter. (Remember, all of the Preserve's fire circles provide free firewood)

All this said, there are 'authorized' means to remove material from the Preserve. For example, the Lakeshore Nature Preserve also supports academics and research as part of its mission. At any time there are multiple research studies and educational activities ongoing throughout the Preserves 300+ acres. Many of these might entail collection of materials for teaching and study. When they do, they are authorized in advance through a permitting process. Learn more about Teaching and Research Permits.

It's understandable to want a memento of a visit to any beautiful place, and the Lakeshore Nature Preserve is no exception. But, for the good of the Preserve, the enjoyment of others, and preservation of lands for scientific research, it's best to leave things where they lie.

Summer 2023 Land Management Notes

By Adam Gundlach, Field Projects Coordinator

As the final "i" is dotted in the Preserve's Master Plan update, focus will shift to prioritizing initiatives outlined in the plan and securing resources to draft detailed site management plans moving forward. During the Master Plan Update process, no major land management initiatives have been undertaken. But that doesn't mean there has been a lack of work to be accomplished. The focus has been on maintaining progress in areas where years of effort has been invested, including Eagle Heights Woods, Willow Creek savanna, Frautschi Point, Picnic Point, Bill's Woods and Biocore prairie. Without consistent follow-up to maintain these areas, their health and composition quickly begin to revert to dominance by invasive brush and dense shade.

Eagle Heights Woods - Tall bellflower (Campanula americana) displays an abundant show of blooms among the boles of oaks in mid-July 2023. Preserve staff along with the Prairie Partners intern crew and volunteer Suzy Will-Wolf completed spring and summer vegetation surveys on the west side of the woods. Baseline surveys were performed in 2017 before invasive brush removal.



Seeded in February 2022, this burn unit in Eagle Heights Woods blooms with tall bellflower.

Willow Creek Woods - After a March 2023 prescribed burn, compass plant (Silphium laciniatum) flower stalks reached for the blue sky following a spell of



Compass plant

July days cloaked by wildfire smoke. An impressive display of compass plant also bloomed in the Lot 60 swale prairie despite drought conditions that wilted many neighboring plants. The Preserve's student Natural Area Assistants worked throughout the summer to keep weeds in-check. They targeted aggressive non-native legumes (birdsfoot trefoil and crown vetch), woody resprouts, and dense clones of Canada goldenrod with herbicide to open opportunities for other plant species to persist.

Picnic Point – Thousands of people pass by the burial mounds group on Picnic Point each year. Few of them are aware of the history and cultural importance of the site, or how much attention goes into its care. Formerly, a buckthorn thicket obscured the mounds group and pressed right up to the noses of passersby on the path. Today, a glimpse of open oak woodland habitat has slowly returned. A rather timid prescribed burn in early April was just the trick to open the site for additional seeding and to stimulate a diversity of wildflowers this summer.

Biocore Prairie – The Prairie Partners intern crew cleared woody encroachment on the west end of the prairie, while the east end of the prairie (the oldest section) was bursting with blooms throughout the summer following a prescribed burn on April 10.



An eastern tiger swallowtail black morph (female) sips nectar on Rosinweed.

Pale purple coneflower blooms following an April burn in Biocore Prairie.



Frautschi Point -**Boley Tree Service** removed dead and

declining ash trees along main paths. Potentially hazardous trees along secondary trails will be addressed as resources allow. The Second Oak project area continues to receive management attention from staff and volunteers to push back on invasive brush regrowth and remove herbaceous weeds. The area is scheduled for an autumn prescribed burn to further savanna and woodland management and prepare the site for additional seeding. Preserve staff also assisted Professor George Meindl in establishing a series of deer exclusion plots that will be used by students in the Forest & Wildlife Ecology: Disturbance Ecology Lab for years to come to study the impacts of herbivory on forest ecosystems.

Bill's Woods – Spring drought conditions largely prevented establishment of plants following a prescribed burn in early April. Interestingly, brush pile burn scars from the winter, which were seeded earlier, harbor dense nodes of native plants that will bloom next year. Some of the burn pile sites were preferred dust bath locations for wild turkeys, and those spots also lacked seed establishment with the routine disturbance of roiling fowl. Continued fire management, brush control, and supplemental seeding will have this open woodland sparkling with floral delights in the years ahead.



Turkeys used burn pile sites as dust baths after drought conditions prevented seed germination.

Staff and interns adjusted work schedules around unsafe air quality days due to Canadian wildfire smoke.



All photos by Adam Gundlach

Four Generations Enjoy the Preserve

UW alum Ralph Smith recently shared two photos with Preserve staff. One is a photo of his grandfather, Herbert Higbee Smith, circa 1923 who graduated from the UW with a BA in Economics (1924). The other is a photo of Ralph's son Ian, age 16. The photos were taken 100 years apart with great grandfather and great grandson both perching on a willow tree at the tip of Picnic Point!

According to Ralph, his son is the 4th generation Smith to have enjoyed Picnic Point and the Lakeshore Nature Preserve!

Ralph's father, Robert Smith, who passed away in April at the age of 94, earned two UW degrees—a BS in Journalism (1950) and an MS in Political Science (1952). He proposed to his wife, Rita Duren Smith, on the end of Picnic Point in the summer of 1972, and they celebrated their 50th wedding anniversary before his passing.

Ralph graduated with a BA in Physical Geography (1985). He had several Geography classes in the Preserve—soil geomorphology and vegetation mapping being the main projects of the Picnic Point excursions. He lived in Sullivan





Great grandfather and great grandson pose on a willow tree at the end of Picnic Point 100 years apart!

Hall near Lake Mendota and recalls how he and friends enjoyed campfires and runs on Picnic Point.

Does your family have stories and long connections to the Preserve? Feel free to reach out and share them with us!



SAVE THE DATE FOR FILL THE HILL: "FLOCKTOBER" 5-6

Starting at 5 p.m. on October 5, every gift the UW receives will add one pink lawn flamingo to the flock on Bascom Hill. This fabulous feathery tradition raises funds to help ensure that UW-Madison remains a world leader of education, research, and innovation for another 175 years!

Fill the Hill gifts can be directed to the **Lakeshore Nature Preserve!**

Visit <u>uwflamingos.com</u> anytime between Thursday October 5, at 5 p.m. CDT and Friday October 6, at 5 p.m. CDT to make a gift.

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- Parker Gimbel
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The Office of Sustainability, under the direction of Dr. Missy Nergard, serves as the administrative home for the Lakeshore Nature Preserve.

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