

# LAKESHORE NATURE PRESERVE E-NEWSLETTER

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## Preserve Supports Mission of Ecology 460 to Provide Experiential Education

By Kyle Webert, General Ecology Course Coordinator

The Lakeshore Nature Preserve serves a crucial role in our ability to teach ecology in an experiential way on the UW campus. We conduct multiple instructor-guided labs each semester in the Preserve where students collect *real* data to investigate ecological concepts, like tree community gradients and niche partitioning between similar species.

We also try to instill a sense of environmental stewardship in our students by performing a service learning activity in the spring and summer, which Preserve staff happily coordinates. As part of their service, students have cut buckthorn, pulled garlic mustard and Queen Anne's lace, and collected prairie seed.

Students also regularly choose to carryout their independent research projects in the Preserve where there are numerous habitat types in which to conduct experiments. In fact, students in Ecology 460 held 31 research permits in the Preserve last year. (See below right.)

The Preserve is easily accessible to students who would otherwise be unable to travel to natural areas further afield. Without support from the Preserve many students would be constrained to learning ecology in a laboratory.

The hands-on research and service opportunities the Preserve supports make ecological concepts come alive for the students, and instills a deeper understanding of the natural world around them. We are incredibly grateful to the Preserve and its wonderful staff for supporting our educational mission to provide students with experiential education opportunities in ecology founded on student-led research.

The photo to the right shows a 460 lab section at Picnic Point discussing Aldo Leopold's "Land Ethic" after pulling garlic mustard in the Preserve's Bill's Woods.

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### Sampling of Ecology 460 research projects conducted in the Lakeshore Nature Preserve in 2017:

- Effect of vegetation on water retention of soil
- Predation threat on foraging behavior of small mammals
- The effects of roadway traffic on bird activity
- Mapping acorn dispersal distributions of *Sciuridae*
- Have nature reserves limited soil contamination when compared to urban areas?
- Impact of black knot fungus on black cherry trees
- Density of conifer trees on soil PH
- Insect density in forested and unforested areas
- Effect of land use on water quality in Madison lakes

# Researchers Study Preserve Bat Populations to Combat White-Nose Syndrome

By Laura Wyatt, Preserve Program Manager

Did you know a single Little Brown Bat (*Myotis lucifugus*)—one of 7 species native to Wisconsin—can eat between 600 and 1,000 Mosquito-sized bugs in an hour? Bats are very important both ecologically and economically, and their populations have plummeted due to White-Nose Syndrome (WNS)—a fungal disease affecting hibernating bats causing them to die in unprecedented numbers.

Scientists with the U.S. Geological Survey National Wildlife Health Center and Wisconsin Department of Natural Resources are studying Lakeshore Nature Preserve bat populations in their work with WNS surveillance strategies and appropriate delivery methods for potential vaccines.

The USGS research team conducted mist-net surveys for 1-3 nights at a time in May, June, and August. Captured bats were screened for suspect WNS lesions, their wings and muzzles were swabbed, and a guano pellet was collected from each. In addition, guano was collected under the bat box near the entrance to Picnic Point. All animal-related research conducted within the Preserve conforms to UW-Madison Research Animal Resources Center requirements.



Researchers collecting a skin swab from a little brown bat captured at the Picnic Point maternity colony during the summer to test for the fungus that causes white-nose syndrome. Photo by UWGS NWHC.



Guano trap underneath a bat box hosting a maternity colony of little brown bats. Researchers are investigating the ability to detect the fungus that causes white-nose syndrome during the summer which could expand surveillance options in regions where access to bats during winter, when the disease is most prevalent, is challenging. Photo by UWGS NWHC.



Research team working to capture little brown bats at a bat box to test for the ability to detect the fungus that causes white-nose syndrome during the summer on bats and in their guano. Photo by UWGS NWHC.

**Citizen Scientists are getting in on the action too.** Friends of the Preserve members Kennedy Gilchrist and Levi Wood conducted acoustic bat surveys in the Preserve for the last three seasons as volunteers with the [Wisconsin Bat Program](#), coordinated by the Wisconsin Department of Natural Resources. Volunteers use a handheld ultrasonic detector to detect the presence of bats by converting their echolocation ultrasound signals to audible frequencies. Individuals interesting in assisting with bat monitoring in the Preserve next summer can contact the Friends at [preservefriends@gmail.com](mailto:preservefriends@gmail.com).



## A Relationship Secured at UW-Madison Gives Back to the Preserve

By Julia White Jaegersberg '86, daughter of Grace and Maury White

For a couple whose lives revolved around UW-Madison and enjoying nature, it only seemed fitting to commemorate their strong connection to the university by sponsoring a bench east of Picnic Point's Fire Circle #2.

Grace and Maurice White (Maury, who passed away in 2014 at age 95) met at the university after WWII when Maury returned to Madison to complete his degree in agricultural journalism and Grace Witter was an undergrad studying home economics journalism. We always heard as children, "we met in the darkroom," which seemed very romantic. After five dates, he proposed and they married in 1947.

Maury went on to earn his master's degree at UW-Madison and a PhD at Cornell University. Here at the UW, he served as a professor of agricultural journalism, hosted WHA's mid-day farm hour for 20 years and then worked as assistant dean in the College of Agriculture managing the Farm Short Course. Grace graduated from UW-Madison in 1947 and also worked in journalism where she served as

editor of a UW-Madison psychiatry magazine and wrote the book *Cooperative Extension in Wisconsin 1962 – 1982*.

"Sponsoring this bench and supporting the Preserve means so much to me because we took our four children here on Sunday picnics. And as you sit here, you enjoy a spectacular view of the university that served as the backdrop of our lives," shares Grace White.



Grace White enjoys the view from the bench her family donated to the Preserve. Photo by Julia White Jaegersberg.

## Moving the Preserve FORWARD

By Gary Brown, Preserve Director

The sights, sounds, and scents of the fall season surround us. A kaleidoscope of color displayed in fall leaves, the sounds of migrating birds overhead, and the faint smell of a fire at one of the fire circles along Picnic Point tell us change is in the air. We are fortunate to be able to experience the ever-changing natural world around us right here on campus in the Lakeshore Nature Preserve, just footsteps from our classrooms, labs, and offices.

While the university administration is generous in supporting many aspects of the Preserve, private gifts given through the Wisconsin Foundation and Alumni Association (WFAA) provide the opportunity for us to more fully manage the land on an on-going basis. Gift funds support our prescribed fire program, invasive species management, our volunteer program, our student interns and summer technicians, and restoration plantings, even basic cleaning of the pit toilets is covered by private gifts.

Private donations also make it possible for us to upgrade our fire circles, restore specific management areas such as Eagle Heights Woods, and add capital features such as a sign at Raymer's Cove, or the new informational kiosk at the base of Picnic Point.

In this season of reflection and thanksgiving, we encourage all of our stakeholders and friends to consider making a gift to the WFAA and directing that gift to the Lakeshore Nature Preserve Stewardship or Endowment funds. Gifts of all sizes are important and your continual generosity helps us move the Preserve FORWARD each and every year. **Thank you in advance for keeping the Preserve in mind as you consider your annual giving.** Enjoy the sights, smells, and sounds of the season.



## Volunteer Spotlight: Vince Jenkins

By Bryn Scriver, Preserve Volunteer and Outreach Coordinator

When asked why he volunteers for the Lakeshore Nature Preserve Vince Jenkins said it is his small way of giving back after working at the university for a number of years. He retired from the UW-Madison School of Education's MERIT Library in September 2016.

"The Preserve is part of the UW-Madison campus, and I welcomed a reason to walk its paths and get to know them better (while picking up the occasional piece of trash)."

Vince serves the Preserve by monitoring trail conditions and keeping our three informational kiosks clean. He has also been willing to take on extra projects such as inventorying our directional signs and replacing worn and faded audio trail signs.

Vince enjoys being outdoors and seeing students, UW employees, and the community using the paths and other amenities provided by the Preserve. Through volunteering Vince has learned more about how the Preserve is used for education, for science, and for understanding the social history of the Madison Lakes.

When he is not volunteering for the Preserve, Vince likes to read history and historical fiction (he is a retired librarian after all!).

We are pleased to have Vince on our team!

To learn how you can get involved in the Preserve please visit the [Preserve website](#).



Vince Jenkins volunteers his time to help keep the Preserve clean and safe. Photo by Bryn Scriver.

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## Call for On-going Volunteers!

If you are looking for a **way to support the Preserve and get outside** while getting some purposeful exercise, you may be interested in **becoming an on-going volunteer!** These are folks who are interested in engaging in a regular, on-going, volunteer activity either as part of a group or as an individual. After initial training by Preserve staff, individuals choose from identified projects. Our next training session will be held in early 2018.

We are especially interested in finding **trail monitors and people who have experience with native plant gardening** for maintaining our entrance plantings.

If you are interested in learning more about this opportunity, please contact Preserve Volunteer Coordinator, Bryn Scriver, at [bryn.scriver@wisc.edu](mailto:bryn.scriver@wisc.edu) or 608-220-5560.





## For the Birds — Citizen Science in the Preserve

By Gisela Kutzbach, President, Friends of the Lakeshore Nature Preserve

The Friends of the Preserve are helping two bird species that have seen a steady decline in Wisconsin over the last decades through citizen science projects. In 2014 they established a Bluebird trail around the perimeter of the Biocore Prairie and this last spring they installed a Purple Martin house on the edge of the prairie. These structures contribute to increase their numbers and serve as a regular destination of the popular Bird and Nature Walks sponsored by the Friends every fourth Sunday.

The nest boxes for the Biocore Bluebird Trail were built from reclaimed cedar boards and installed along existing walking paths. The Bluebirds and other song birds that use these boxes give enjoyment to the many visitors of the Preserve and have proven to successfully reverse the decline of Bluebirds in the state. A team of four volunteer monitors checks the nest boxes weekly to count eggs, nestlings, and fledglings. Over time, the monitoring crew is learning optimal habitat locations and distances between boxes for Bluebirds. Bluebirds prefer open fields with scattered trees, conditions found along the edges of Biocore Prairie. There were 7 Bluebird fledglings in 2014, 5 in 2015, 10 in 2016, and 3 in 2017.

Purple Martins rely exclusively on nest boxes built by humans and prefer multiple-compartment structures. The Friends installed a Purple Martin house at the edge of Biocore Prairie with the intent to reintroduce these birds to the Preserve. The prairie, rich with flying insects, and the nearby lake are well suited for martins. In mid-June two pairs of subadult martins discovered the empty house.

One pair nested and produced 4 young that fledged in early August. We hope they will return next spring. Throughout the season, a team of six Friends volunteers monitored the house 2-3 times every week. Biocore student interns and gardeners in the adjacent community garden helped keep track of happenings at the house.



Bluebirds like to perch in a nearby tree or post to watch the nest box and sing. Photo by Gisela Kutzbach.



Many visitors to the Biocore Prairie were interested in learning more about the Purple Martins, including the Prairie Partners interns. Photo by Seth McGee.

### Free Friends Sponsored Field Trips

**Nov 26—Bird and Nature Walk (Sun, 1:30–3:00pm).\*\***

**Dec 9—Birding Madison's Lakes (Sat, 7:30-11:00am).**

We will look for waterfowl, gulls, and winter birds. Bring a scope if you have one. Meet at the middle of UW Lot 60 at the north end of Walnut Street. Leader: Quentin Yoerger, [info@madisonaudubon.org](mailto:info@madisonaudubon.org).

**Dec 24—Bird and Nature Walk (Sun, 1:30–3:00pm).\*\***

**Jan 7—Animal Tracking in the Preserve (Sun, 1:00-3:00pm).** Join professor David Drake as he shows how to track foxes, coyotes, and other denizens of the Lakeshore Nature Preserve. Meet at UW Lot 129 at the Picnic Point entrance. Leader: David Drake, [ddrake2@wisc.edu](mailto:ddrake2@wisc.edu).

**Jan 28—Bird and Nature Walk (Sun, 1:30–3:00pm).\*\***

**Feb 3—The Eyes Have It (Sat, 1:30-3:00pm).** Dick Dubielzig, emeritus professor of Veterinary Pathology, will talk about visual adaptations by different animals to their varied environments, and demonstrate examples from the Comparative Ocular Pathology Lab. **This event is limited to the first 20 registrants.** Contact: Dick Dubielzig, [richard.dubielzig@wisc.edu](mailto:richard.dubielzig@wisc.edu).

**Feb 25 —Bird and Nature Walk (Sun, 1:30–3:00pm).\*\***

\*\* Explore the Preserve with a naturalist—families with kids welcome! **Every 4th Sunday of the month.** Meet at Lot 129. Contact: Paul Noeldner (698-0104).

For more information visit the [Friends website](http://Friends website).

## Eagle Heights Woods Update

By Adam Gundlach, Preserve Field Projects Coordinator

The 2017 growing season was one of regrowth and monitoring following a successful spring burn through the central corridor of the woods. Vegetation surveys conducted in the West Zone in May and July, led by Emerita Senior Scientist in the Department of Botany and Friends member Susan Will-Wolf, documented the baseline plant community ahead of invasive brush removal planned for winter 2017-18.

During a tour with Friends of the Lakeshore Nature Preserve members in July, a keen eye among the group identified a cluster of three white oak seedlings along a trail near the center of the site. While the discovery was encouraging, the long-term survival of such oak seedlings will depend on increasing sunlight to the understory. Oak dominates much of the canopy in Eagle Heights Woods, but young and middle age classes are not present. Young oaks, especially white and bur oak, require abundant light to grow into maturity. With a long-term goal of maintaining the oak community, selective tree removals will be a priority in the years ahead to create suitable canopy gaps for oak regeneration.

Good Oak Ecological Services has taken advantage of pleasant early autumn weather to work through areas cleared of invasive brush in previous years (Mounds, Central, and South Zones), performing cut-stem herbicide applications to undesirable woody regrowth and stems missed in the initial clearing. A fall burn planned for the western slope of the Mounds and Central Zones would cover an area left out of the spring burn. Later this winter, Good Oak crews will conduct the initial invasive brush removal in the West Zone (approximately 4 acres). When ground conditions allow, Wolfe Tree Service will address hazardous tree issues that have arisen this year and continue to remove excess woody debris from the area surrounding the Indian burial mounds.

Photo of Eagle Heights Woods by Adam Gundlach.



Photo by Bryn Scriver.

### Quercus as Keystone

[Research](#) by University of Delaware Professor Doug Tallamy in the mid-Atlantic region showed Quercus species (oaks) supported 534 Lepidoptera (butterfly/moth) species, leading all plants studied. The larvae produced by the moths and butterflies are a vital food resource for other insects, birds, and small mammals. The thick, gnarled bark of a mature oak tree provides habitat refuge for many insects, which in turn provides additional forage for insectivores. Acorns are an important, nutrient-dense food source for numerous wildlife species. Oaks are mycorrhizal symbionts with a variety of fungal species, and waves of saprophytic fungi slowly devour the dense wood as it returns to the soil. Oak trees act as engineers of their environment, altering many biogeophysical processes, including soil development, water cycling, nutrient cycling, fire regimes, and associated ecosystem dynamics.

[Chicago Wilderness](#), a regional alliance of conservation organizations, has drafted an [Oak Ecosystem Recovery Plan](#) for the Chicago Wilderness Region, which extends into southeastern Wisconsin. A quote from the plan highlights the critical management need: *"Lack of oak regeneration is paramount to the challenges that oak ecosystems face. Without age diversity in our oak population, we run the risk of losing this vital regional resource."*





# Willow Creek Woods — Ten Years On

Photos taken November 4, 2007 before management show the thicket of invasive brush and early successional trees that crowded open-grown oaks. Ten years later, the brush is gone and so are the storage sheds that impinged on the Indian burial mounds. This fall we have prepared the south east corner of the site for winter seeding to convert an area used by Rec Sports for a putting green to oak savanna. Enjoy the views of the old oaks and native flowers that now mark the Willow Creek Woods site.



Photos by Daniel Einstein (2007) and Adam Gundlach (2017).

## Experience the Preserve Through volunteering!

Attending work parties is a great way to enjoy the Lakeshore Nature Preserve while working with other volunteers to care for it.

Visit the [Volunteer page on our website](#) for information on drop-in volunteer work parties and group service projects.

## Volunteer work parties:

Date	Day	Meeting place
Nov 19	Sun	Picnic Point Lot 129
Dec 2	Sat	Frautschi Point parking lot
Jan		Winter Break!
Feb 18	Sun	Frautschi Point parking lot
Mar 3	Sat	Picnic Point Lot 129
Mar 18	Sun	Picnic Point Lot 129

**Time: 9:00 am–Noon**



## Welcome Our New Seasonal Staff

**Michal Michiels**, a Junior at UW-Madison studying Wildlife Ecology, joined the Preserve staff in October as a seasonal field technician. Her duties include caring for the Picnic Point fire circles, stocking firewood, and controlling invasive species. According to Michal this position has allowed her to take part in what she loves to do—preserving the natural areas of our environment and creating a safe place for the wildlife who dwell there—while gaining hands-on land management experience.

One thing Michal would like everyone to know about the Preserve, is how large it is and how many trails there are for visitor enjoyment. “It is a much larger sanctuary than most people realize.”



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with a gift to the Stewardship Fund  
at the UW Foundation.**

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### Lakeshore Nature Preserve Staff

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*For announcements, photos, and information on  
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