www.bluemounds.org

BMAP NEWS

BMAP
BLUE MOUNDS AREA PROJECT

Conservation and Community. Together. *Fall 2024 • Volume 27 Number 3*

Change and Persistence Among Prairie Grasses

Dan Carter (Ecologist, The Prairie Enthusiasts)

This article was originally published in The Prairie Promoter*, Volume 36 No. 2.*

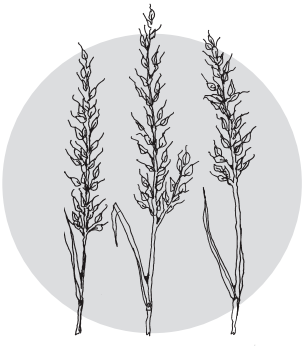
There are many misconceptions about prairies that cloud restoration, reconstruction and management. Prominent among these is the "big four," a concept that situates big bluestem (*Andropogon gerardii*), Indiangrass (*Sorghastrum nutans*), switchgrass (*Panicum virgatum*) and little bluestem (*Schizachyrium scoparium*) atop the dominant hierarchy of plants on a tallgrass prairie. The "big four" concept has a far-reaching influence on grassland management, scientific study and seed mix design. It's called tallgrass prairie, after all!

The "big four" are indeed co-dominant in many places where prairie vegetation occurs today. But, except for little bluestem, they were not historically the most dominant grasses on much of the prairie landscape. Nor are they most dominant on many of the best remaining old-growth prairies.

John Curtis (1959)[1] described the composition of the least disturbed old-growth prairies in Wisconsin. Big bluestem was present on all studied mesic prairies, but porcupine grass (*Hesperostipa spartea),* Leiberg's panic grass (*Dichanthelium leibergii*)

Continued on page 3

BLUESTEM
Andropogon gerardii



INDIANGRASS
Sorghastrum nutans

SWITCHGRASS
Panicum virgatum

LITTLE BLUESTEM
Schizachyrium scoparium

IN THIS ISSUE

PRESIDENT'S MESSAGE

Greg Jones

The first thing I want to say is "welcome" to our newest Board member, Larry Hartzke. Larry is a long-standing member of BMAP who is working on the restoration of his land in western Dane County. He brings a good skill set to the Board that includes knowledge of websites. This is very welcome, and he's already getting to work on improving our website.

We still have a need for more participation. If you think you can help BMAP by volunteering some of your time, please let us know.

I also wanted to talk about my spring burn, as it is still on my mind. Our prairie is growing on some old pasture ground. As you may surmise, we still have cool-season grasses in some places. One of our reasons for burning is to deal an insult to these grasses every spring and set them back. This helps our other plants, which are currently competing with them. The burn takes away the grasses' head start.

This spring, we got great weather in March. We were able to run fire through our prairie areas in mid-March, very early in the season. I was so pleased to get it done early — almost smug about it. I wasn't alone: there were many other early burns in the area. I participated in some and could see the smoke of many others.

So there was my prairie, all black already as the cool-season grasses started to grow. As it turned out, I did not deal an insult to the grasses at all. They got a free and clear head start on everything. Maybe the super-early burn was not such a good idea.

It's a hard balance. You need good weather for a good burn. And even if I get this good weather early again next year, it will be a hard decision whether to postpone and risk not having any good weather later in the season. I would love to hear other comments and thoughts on an early burn. I know that a lot of you folks hire companies to facilitate your burns. They always have more burns to do than they have time for. When they get good weather, they absolutely need to take advantage of it.

We have one outdoor event left for 2024. On September 28, we will hold a Walk with a Naturalist at Lodi Marsh led by our own Sam Anderson. Hopefully the biting insects will be calming down for the season. I'm really looking forward to this event, as Sam is so knowledgeable I know he'll have a lot to offer us. For this upcoming winter, we have scheduled another lineup of three Winter Conversations. I hope I will see you at one of our events.

ECOLOGIST'S REPORT

Sam Anderson

This summer has certainly been a fruitful one! After my first field season as the BMAP Outreach Ecologist, I have been so grateful for all of the excellent conversations and pleasant surprises in my new role. With over twenty property visits this season, I've had the chance to criss-cross much of Dane, Iowa, Green and Sauk counties — visiting some beautiful prairies, valleys, woodlands and ridgetops throughout our part of the state.

The BMAP community has also been busy coming together, with dozens of members participating in our annual Property Tours, Walks with a Naturalist and Natural Communities of Southwestern Wisconsin class. I've been struck by how engaged and experienced so many of our BMAP land stewards are. Mainly, I've noticed how any time passionate land stewards get together, we always share knowledge, experiences and more than a bit of laughter. For me, these are all essential to continuing our support of natural communities.

Currently, southern Wisconsin is almost 10 inches above average precipitation levels. The color and height of our grasslands certainly show it! Many property owners have noted the blooming and fruiting of species that took a hit with last summer's drought, highlighting the resilience and adaptability of these dynamic systems.

The rain also highlights the services that our natural communities provide, storing rainfall and preventing the erosion of valuable topsoil. Members have also delightedly shared their observations of spongy moths dying off as a result of rainy weather boosting the impacts of fungal parasites. More than ever, ecological restoration and land stewardship play a critical role not only in supporting biodiversity, but in buffering our communities against unexpected events. The 2023 drought and 2024 rainy seasons highlight that just like our native flora, we should be ready to adapt to conditions and capitalize on opportunities that the world sends in our direction.

With all of this rain, my garden has been going absolutely crazy with more green beans, cucumbers and zucchini than one person could reasonably eat. It reminds me of an excerpt from Dr. Robin Wall Kimmerer's *Braiding Sweetgrass*. She discusses how, in times of abundance, it is both an obligation and a joy to share what is provided to you. She says that sharing allows for responsible resource use and fosters community. This season, sharing could refer to vegetables, but it could also mean sharing native plant seed, lending tools or labor to a neighbor, providing a bit of extra attention to particular plant and pollinator species or sharing

Continued on page 7

Prairie Grasses

Continued from page 1

Photo by Dan Carter

and prairie dropseed (*Sporobolus heterolepis*) were the most frequent grasses. Frequencies, from Curtis, are the percentage of square meter quadrats that a species occurs within for a given community type — basically, how likely the species is to be at your feet if you're walking in the prairie.

Porcupine grass was twice as frequent on mesic prairie as big bluestem! Big bluestem was the fifth most frequent grass on dry prairies behind little bluestem, side-oats grama (*Bouteloua curtipendula*), long-stalked panic grass (*Dichanthelium perlongum*) and prairie dropseed; and third most frequent on dry-mesic prairie behind little bluestem and side-oats grama. Only on wet-mesic prairie was big bluestem the most frequent among the grasses. Still, little bluestem's frequency on wet-mesic prairie was about three-quarters of the frequency of big bluestem. Prairie cordgrass (*Spartina pectinata*) and Canada blue-joint grass (*Calamagrostis canadensis*) were the species most often present (frequency data lacking) on wet prairie.

In Iowa, the only grasses noted by Ada Hayden (1919)[2] among the "principal" species of prairie remaining on the gently rolling uplands (mesic) immediately north of Ames, Iowa were porcupine grass and prairie dropseed. Later, Brotherson (1969)[3], Kennedy (1969) [4], and Glenn-Lewin (1976)[5] studied composition on three old-growth prairies in northern and western Iowa and found prairie dropseed, Leiberg's panic grass and porcupine grass to be the most common on uplands at the respective sites.

In the Red River Valley of northwest Minnesota, Dziadyk and Clambey (1980)[6] described old-growth prairie communities dominated by blue grama (*Bouteloua gracilis*) and porcupine grass on dry ground, prairie dropseed followed by little bluestem on gentle slopes, little bluestem followed by prairie dropseed on moderately well-drained level areas and big bluestem and slim-stem reed-grass (*Calamagrostis stricta*) together on low prairie over poorly drained soils.

Weaver and Clements' (1938)[7] concept of "true prairie," which they extend to a region stretching from Illinois to Nebraska and northwest Minnesota to Oklahoma, is co-dominated by mid grasses: porcupine grass, prairie dropseed, rough dropseed (*Sporobolus compositus*), little bluestem, side-oats grama and needlegrass (*Hesperostipa comata,* in the west). Weaver worked extensively on prairies in the western part of the tallgrass prairie during the first half of the twentieth century, including an early study of fire effects at the Agricultural Experiment Station just north of Manhattan, Kansas. There, little bluestem and Junegrass (*Koeleria macrantha*) were initially the top two grasses (big bluestem was third). Composition shifted toward big bluestem with annual late spring burning but not late fall burning or earlier spring burning[8,9]. Indeed, late spring burning in the western and southwestern tallgrass prairie region to promote big bluestem for cattle pasture is part of why prairie composition changed there during the last century. Weaver and Clements observed these changes occurring and attributed them to the grazing and burning practices of the time, saying that the result was "that their [the mid grasses'] tallgrass competitors, notably *Andropogon*, gradually moved up the slopes and today appear to be essential members of the prairie relicts."

Why did European land use sometimes drive compositional change towards the tall grasses like big bluestem? Late spring burning favors the growth form of long-rhizomatous warm-season grasses. Their growing points remain below the soil surface until very late spring or early summer, so growth of their active shoots can continue uninterrupted despite damage to the aboveground foliage with late spring burns. The growing points of most bunchgrasses (porcupine grass, prairie dropseed, Leiberg's panic grass, little bluestem, Junegrass, etc.) rise above the soil surface and become vulnerable to fire shortly after they begin growth. If these are burned off, the bunchgrasses must activate reserve buds to replace the lost shoots. That alone puts them at a disadvantage, but their reserves of buds tend to be small compared to long-rhizomatous big bluestem and Indiangrass[10]. Their regenerative

Continued on page 4

Photo by Dan Carter

capacity is sooner exhausted in response to removal of active shoots. The cool-season bunchgrasses are hit especially hard by late spring burning because of their early growth, but even little bluestem (a warm-season species) can be harmed by later spring burns due to its difference in growth form. Prairie dropseed, another warm-season grass, is harmed because it begins growth nearly as early as the cool-season species despite its warm-season physiology. On most upland old-growth prairie, late spring burning favors a subset of native grasses that was not historically so abundant.

The effects of fire exclusion on composition can be similar to those of frequent late spring burning. Species with elongating rhizomes are better able to emerge through excessive accumulations of thatch. Hensel (1923)[11] observed this 100 years ago in the Kansas Flint Hills. Little bluestem increased with annual early spring burning, but big bluestem replaced little bluestem atop the dominance hierarchy when fire was excluded.

Weaver and Rowland (1952)[12] also observed this in eastern Nebraska in the absence of burning, haying, or grazing: "Consequences of the effects of the mulch upon the environment were production of a nearly pure, but somewhat thinner than normal, stand of *Andropogon* [big bluestem]. The understory of upland prairie had all but disappeared. The usual mid grasses of upland were few or none. Only a few taller forbs remained."

Burning in the presence of excessive litter accumulation, which often occurs on prairies that are only occasionally burned, kills or weakens little bluestem[13] and other bunchgrasses (e.g., needlelegrass)[14]. Their buds are at or just above the soil surface and vulnerable to the increased fire duration when excessive litter has built up. This is not the case for the deeply buried buds along the rhizomes of big bluestem or Indiangrass. Interestingly, excessive litter may interact with fire to affect prairie bunchgrasses and certain invertebrates (skippers: *Hesperia ottoe* and *H. dakotae*)[15] in similar ways, with responses contingent on the amount of litter accumulation!

Photo by Peter Gorman

Porcupine grass

Photo by Tom Givnish

Leiberg's panic grass

Native bunchgrasses decrease for many of the same reasons in response to confined grazing. Porcupine grass is very palatable and emerges before most other prairie grasses, so it disappears quickly upon pasturage[16]. The long-rhizomatous prairie grasses

also decrease in response to grazing[16], but they persist and recover relatively well during rest periods because they have greater reserves of belowground buds available for recovery and their elongating rhizomes help them colonize openings where vegetation has been thinned by disturbance. The position of buds on these long-rhizomatous grasses an inch or two beneath the soil surface also protects this regenerative capacity[10,17]. Weaver recognized the importance of rhizomatous habit for recovery from disturbance, but not bud depth or number. Nonetheless, where grazing was too intense and prolonged, most prairie grasses were replaced by long-rhizomatous, cool-season species like Kentucky bluegrass (*Poa pratensis*), except on the driest sites [1, 2, 16].

The work of Weaver, Curtis, Hayden and others adds important context to our interpretation of more contemporary studies of prairie. This helps us discern between research and management outcomes from altered grasslands that no longer retain old-growth composition, and prairies that still do. Porcupine grass, little bluestem, prairie dropseed, side-oats grama and/or Leiberg's panic grass are usually among the prominent grass species on the best remaining old-growth upland prairies. All of those species differ from big bluestem in their ecologies in ways that have implications for management. Except side-oats grama, many of those differences stem from growth form, cool-season physiology, or both.

Earlier work on composition also highlights the amazing persistence of well-stewarded and less historically exploited old-growth prairies in the face of unprecedented change. Upland old-growth prairies that retain much of their composition have typically experienced:

- fewer periods of excessive litter accumulation.
- fewer late spring burns and more burns between fall and early spring — the more frequent, the better [9,18,19]. True prairie composition was and is an expression of dormant-season fire.
- minimal fenced grazing. Free-roaming deer, elk, bison and their predators and hunters are separate issues.
- less fragmentation[19], but consider that small, less exploited prairies that are well-stewarded retain more of their historical botanical composition than landscape grasslands in the western tallgrass region. Little prairies are more vulnerable to neglect, which argues for their protection and care.

While the confluence of these conditions is tragically rare, the persistence of what remains is reason to keep hope. True prairie in the Midwest has been home to members of flora, fauna, and cultures expanding and contracting east-west and north-south for millennia. Even an island of old-growth prairie carries with it immeasurable ecological memory. We can kindle that memory and facilitate its recovery through stewardship and by building connections among prairie places and prairie people… especially if we can get our hands on more porcupine grass and Leiberg's panic grass!

REFERENCES:

1 Curtis, J. 1959. The vegetation of Wisconsin University of Wisconsin Press. Madison, WI.

2 Hayden, A. 1919. Notes on the floristic features of a prairie province in central Iowa. Proceedings of the Iowa Academy of Science 25: 369-389.

3 Brotherson, J. 1969. Species composition, distribution, and phytosociology of Kalsow Prairie, a mesic tall-grass prairie in Iowa. Dissertation, Iowa State University.

4 Kennedy, R. 1969. An analysis of tall-grass prairie vegetation relative to slope position, Sheeder Prairie. M.S. Thesis, Iowa State University.

5 Glenn-Lewin, D. 1976. The vegetation of Stinson Prairie, Kossuth County, Iowa. Proceedings of the Iowa Academy of Science 83: 88-93.

6 Dziadyk, B. and G. Clambey. 1980. Floristic composition of western Minnesota tallgrass prairie. Proceedings of the Seventh North American Prairie Conference: 45-54.

7 Weaver, J., and F. Clements. 1938. Plant ecology. McGraw-Hill Book Company, Inc. New York and London.

8 Weaver, J., and A. Aldous. 1935. Role of fire in pasture management. Ecology 16:651–654.

9 Towne, G., and C. Owensby. 1984. Long-term effects of annual burning at different dates in ungrazed Kansas tallgrass prairie. Journal of Range Management 37: 392-397.

10 10 Ott, J., Klimešová, J., and D. Hartnett. 2019, The ecology and significance of below-ground bud banks in plants. Annals of Botany 123: 1099-1118.

11 Hensel, R. 1923. Recent studies of the effect of burning on grassland vegetation. Ecology 4: 183-188.

12 Weaver, J. and N. Rowland. Effects of excessive natural mulch on development, yield, and structure of native grassland. Botanical Gazette 114: 1-19.

13 Gagnon, P., K. Harms, K., Platt, W., Passmore, H., and J. Myers. 2012. Small-scale variation in fuel loads differently affects two co-dominant bunchgrasses in a species-rich pine savanna. PLoS ONE 7: e29674.

14 Haile, K. 2011. Fuel load and heat effects on northern mixed prairie and four prominent rangeland graminoids. Thesis, Montana State University-Bozeman.

15 Dana R. 1991. Conservation management of the prairie skippers Hesperia dacotae and Hesperia ottoe. Minnesota Agricultural Experiment Station Bulletin 594, University of Minnesota.

16 Weaver, J. 1954. North American prairie. Johnsen Publishing Company. Lincoln, NE.

17 Klimešová J, and L. Klimeš. 2007. Bud banks and their role in vegetative regeneration – a literature review and proposal for simple classification and assessment. Perspectives in Plant Ecology, Evolution and Systematics 8: 115–129.

18 Bowles, M. and M. Jones. 2013 Repeated burning of eastern tallgrass prairie increases richness and diversity, stabilizing late successional vegetation. Ecological Applications 23: 464-478.

19 Alstad, A., Damschen, E., Givnish, T., Harrington, J., Leach, M. and D. Rogers. The pace of plant community change is accelerating in remnant prairies. Science Advances. 2: e1500975

Photo by Jasmine Wyant

PEOPLE students learn how to sample macroinvertebrates to gauge the health of a river.

Activities of the Upper Sugar River Watershed Association

By Heather Hasenstein (Volunteer Coordinator, Upper Sugar River Watershed Association)

The Upper Sugar River Watershed Association (AKA Upper Sugar) had a full first half of the year! Late winter found us speaking in a Community & Nonprofit Leadership class at UW-Madison that introduces students to careers in the nonprofit sector, including conservation careers. We also hosted a New Zealand mud snail research day where we collected and cleaned snails for the Conservation Dogs Collective to use in training their dogs to sniff out these invasive critters.

This spring, we got our Explorer Backpack Program off the ground during a day at Stewart Lake State Park with the Mount Horeb Intermediate Center's fifth-grade class. The 115 students used these backpacks to explore ecology at Stewart

Lake along the Interactive Watershed Trail and to learn about ways they can help the environment. We are looking for partners in other Dane County Parks and natural areas to do more activities like this.

We also held the Rob's Sugar River Ramble bike and paddle fundraiser event, with over 110 participants and 25 volunteers on a nearly perfect June day.

The beginning of July was heralded by a wonderful two days spent introducing a group of 11 high school students and 4 undergraduate mentors from the UW's PEOPLE program to environmental careers. The PEOPLE program is a pre-college program for first generation college-bound students in the Madison and Milwaukee school systems.

The students were insightful and left with a greater appreciation for the outdoors and more ideas about the environmental careers that are available to them. One student said, "It was so fun to see what was in the water and acknowledge the life in these spaces that I don't usually get to be in. It's really a change in perspective." Said another: "I appreciated getting to know about various careers that include direct interaction with nature."

Upper Sugar has many ongoing programs throughout the year as well, such as our purple loosestrife bio-control program, Water Action Volunteers, workdays at State Natural Areas and the Clean Boats Clean Waters program — to name just a few! In addition to the events mentioned above, we also participate in Snapshot Day, when citizen scientists throughout the state of Wisconsin take a day to record the invasive species they find. So please visit the Events page on our website (uppersugar.org/calendar_of_events) to find out what we have in store! We hope to see you out in the Upper Sugar River watershed soon.

Photo by Heather Hasenstein

PEOPLE students get ready to paddle Lake Bellevue and observe aquatic life up close.

ECOLOGIST'S REPORT

Continued from page 2

Photo by Justin DoCanto/Unsplash

knowledge and experiences with a friend.

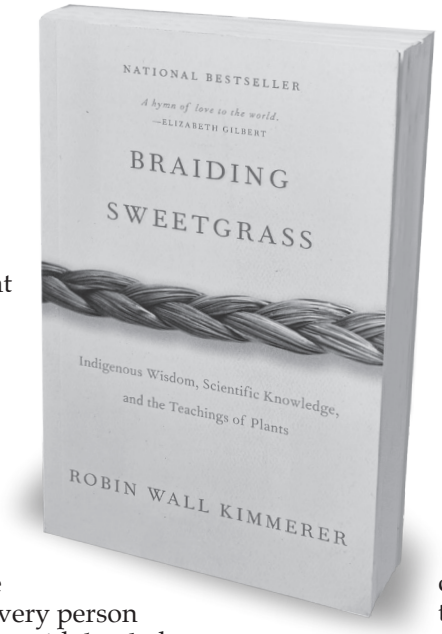
Just like a summer to-do list, our collective work is never quite done. The World Wildlife Federation has reported that the 2024 Eastern Monarch populations were 59% below the previous year. With weather patterns that sometimes feel like whiplash, many species are increasingly vulnerable to extreme weather events and habitat loss. More than ever, land stewardship plays a critical role in supporting native species, providing the space and resources they rely on year after year.

With what I've seen from this growing season so far, I'm excitedly looking forward to future seasons of stewardship and community.

BOOK REVIEW
Braiding Sweetgrass

By Tim Eisele

Tim Eisele is a member of BMAP. Along with his wife Linda, Tim is trying to leave an area of land in Crawford County better than the way it was when they bought it in 1990.



Every land manager needs help.

This help comes in many different ways, one of which is the encouragement that can come from visiting other properties, listening to knowledgeable speakers or reading inspirational books.

At the top of the list for the latter is *A Sand County Almanac*, by the late Aldo Leopold. For every person who owns or engages with land, that book can ignite a spark of connection to the world of natural resources. But for me, a close second to the *Almanac* is *Braiding Sweetgrass: Indigenous Wisdom, Scientific Knowledge*, and the *Teachings of Plants* by Dr. Robin Wall Kimmerer.

Kimmerer's book brings in many of the teachings of indigenous people who lived on the land before it was "settled" by descendants of Europeans. There is lots to mull over in the book, but the one point that will always stick with me is that the native peoples did not feel they owned the land that was under their feet. They saw it as something that was given to them, along with their responsibility to care for it.

"Our lands were where our responsibility to the world was enacted, sacred ground. It belonged to itself; it was a gift, not a commodity, so it could never be bought or sold," Kimmerer writes.

Then she addresses those of us who today "own" land: "In Western thinking, private land is understood to be 'a bundle of rights.' Whereas in a gift economy property has a 'bundle of responsibilities' attached." Wow — that is really something to open the minds of all of us who care for land. We have a responsibility to manage the land we currently "own" and to take into consideration all of the living organisms that share the land with us.

Kimmerer is an enrolled member of the Citizen Potawatomi Nation who attended UW-Madison. At one point in her book, she recalls being a land caretaker at the UW-Madison Arboretum.

Kimmerer continues to reveal the material and spiritual differences between indigenous people and western culture through the story of Skywoman. She writes about taking care of our place on Earth. A plant scientist, she also helps us understand how trees and plants live. She writes that the relationships between plants and humans need to be in balance. I liked the idea of an Honorable Harvest, where taking a life is balanced by giving back to the ones who sustain us.

"How we approach restoration of land depends, of course, on what we believe that 'land' means. If land is just real estate, then restoration looks very different than if land is the source of a subsistence economy and a spiritual home." Kimmerer helps us think about the world as a gift, rather than a commodity, and how we can use gratitude, respect, reciprocity and understanding to give a gift back.

The book is a good read, and a gift in itself. I borrowed a copy from the library and then had to buy my own copy at the UW bookstore so I could highlight my favorite passages. I hope you also enjoyed or will enjoy *Braiding Sweetgrass.*

UPCOMING EVENTS

WALKS WITH A NATURALIST

Lodi Marsh
Saturday, September 28
10:00 AM - 12:00 PM

Robertson Trailhead of the Ice Age Trail, Lodi-Springfield Road, Lodi

While most of BMAP's summer events have already passed, we have one more walk before we wrap up our calendar year. On September 28, BMAP Outreach Ecologist Sam Anderson will lead a Walk with a Naturalist at Lodi Marsh State Natural Area. Starting and ending at the Robertson Trailhead, this walk will venture through a variety of upland and wetland communities and highlight the importance of topography and hydrology to plant communities in southern Wisconsin.

SAVE THE DATE WINTER CONVERSATIONS!

All lectures start at 7:00

Venue TBD - check the next issue of this newsletter or visit bluemounds.org/events

Thursday, February 6:
Restoration at the Former Badger Army Ammunition Plant (Grace Vosen)

Thursday, February 20:
Coyotes in the Prairie (Carl Anderson)

Thursday, March 6:
Garlic Mustard Control (Sam Anderson and Greg Jones)

MEMBER NOTES

BMAP Members Assist in Kahl Park Burn

Photo by Sarah Crittenden

By Sarah Crittenden

Last fall, BMAP members enjoyed a tour of Kahl Halfway Prairie Park in the Town of Berry, with Christine Molling as our guide. This prairie is tended by a group of volunteers, and several of us returned to the park to volunteer on a prescribed burn this spring. BMAP members Dave Lucey, Mark Rauls and Sarah Crittenden joined the burn crew. We had a perfect evening, and the burn went well under the expert guidance of Jim Parry and Dave Lucey.

Photo by Greg Jones

Last summer's BMAP property tour at Kahl Halfway Prairie Park.

NEW BMAP MEMBERS

New Members since last newsletter

- Doug & Karin Butikofer
- Gordy Frank & Melissa Seipel
- Christopher Long
- Erica Reinig
- Ixchel & Eric Ripp

Spread the Word About BMAP!

As a BMAP member, you know that land stewardship in our region requires significant investments of time, resources and energy. You also know that our stewardship of the land is so much more effective and enjoyable when we come together as a community. To support your local ecosystems, **consider asking your neighbors if they would become members of BMAP and get involved in ecological restoration.**

Neighborly support is one of the best ways we can increase the number of acres in restoration and continue to develop our community. People create property boundaries, but fostering biodiversity, creating habitat and promoting ecosystem services help us think beyond our own small pieces of Wisconsin and see ourselves as part of many larger communities.

FROM THE EDITOR

Grace Vosen

When I was putting this Fall 2024 issue together, I didn't ask Greg to write about the dynamics of cool-season grasses in his prairie. I also didn't tell Sam to quote from Braiding Sweetgrass in his Ecologist's Report. It just happened that way: they both touched on concepts that would appear in other articles in the same issue.

In the conservation community, we often converge on the same books, phrases or ideas as a way of conveying our similar experiences with the natural world. Think of the universal phrase, "it depends", which ecologists around the world use to answer questions. Think of Leopold's concept of a land ethic that has forever shaped the way we talk about our love of the land.

As we grow in our understanding of nature, these key concepts will change alongside us. I was fortunate enough to meet Dr. Robin Wall Kimmerer ten years ago, when she shared her ethic of reciprocity and gratitude with an audience of a few dozen at my tiny liberal arts college. Now, many more people are seeking out Kimmerer's writing and using these concepts to guide their land management actions.

Another phrase that occurs again and again in our community is, "What is that [plant, bird, insect, mushroom, etc.]?" If you missed our special section on nature apps in the last newsletter, I recommend you visit BMAP's website to read about various conservationists' experiences with these apps. I am still seeking reviews of apps, field guides, blogs or other written resources to publish in future issues. Reach out to newsletter@bluemounds.org to share your thoughts.

Then, put the apps to work! After learning more about the natural world, people often converge on the same question: "How can I get more involved?". If you'd like to make a bigger difference for our native species, you could become a citizen scientist. Stay tuned to the Winter 2024-25 issue for some ideas of how to help advance ecological research (and don't miss the Upper Sugar River article on page 6).

Prairie on!

BMAP ONLINE

www.bluemounds.org

eBULLETIN

BMAP's monthly eBulletin for announcements, habitat restoration tips and more:
bluemounds.org/connect

FACEBOOK

- BMAP's Facebook page for events and environmental news: **facebook.com/BMAPcommunity**
- BMAP's Facebook group for sharing photos, ideas, and activities: **facebook.com/groups/BMAPcommunity**

OUR MISSION

The Blue Mounds Area Project is a community–based organization that seeks to inspire, inform and empower private landowners in the southwestern Wisconsin region to enjoy, protect and restore native biodiversity and ecosystem health.

OUR OBJECTIVES

1. Promote understanding, appreciation and conservation of native woodlands, prairies, wetlands and savannas and their special species in an economically viable manner, through community outreach programs and private contacts.
2. Act as a clearing house for information from people and organizations involved in preserving native biodiversity including information about plant, animal and habitat identification, management, restoration, seed sources, native plant nurseries and invasive, nonnative species.
3. Encourage cooperative volunteer restoration and management activities.
4. Identify public and private land use changes that may affect ecosystem health and promote community–based stewardship of the unique natural heritage of the Blue Mounds and the southwestern region of Wisconsin.

BMAP
BLUE MOUNDS AREA PROJECT

BMAP BOARD OF DIRECTORS

Greg Jones, President
Mark Rauls, Treasurer
Bill Sonzogni, Secretary
Steve Gauger
Larry Hartzke
Linda Millunzi-Jones
Sarah Crittenden
Sam Anderson, Ecologist
ecologist@bluemounds.org

Interested in volunteering with the Blue Mounds Area Project?
Contact us at: info@bluemounds.org
608-571-4501

BLUE MOUNDS AREA PROJECT MEMBERSHIP FORM

Name(s): _____

Address: _____

City: _____ State: _____ Zip: _____

E-mail address: _____

Membership Status:

☐ Renewal ☐ New Member ☐ Gift Membership for: _____

Membership Level:

☐ Basic $40 ☐ Contributor $70 ☐ Supporter $100 ☐ Lifetime $1000

All memberships, except lifetime, follow the calendar year.

☐ Additional donation beyond your annual membership: _____ TOTAL MEMBERSHIP / DONATION: _____

Make checks payable and return to: Blue Mounds Area Project, PO Box 332, Mount Horeb, WI 53572
or you can contribute online at https://www.bluemounds.org/donor-form

☐ YES, I would like to receive information about site visits. ☐ I'm interested in volunteer opportunities with BMAP.

Thank you! Your contribution is tax deductible to the extent allowed by law.

BMAP
BLUE MOUNDS AREA PROJECT
P.O. Box 332
Mt. Horeb, WI 53572

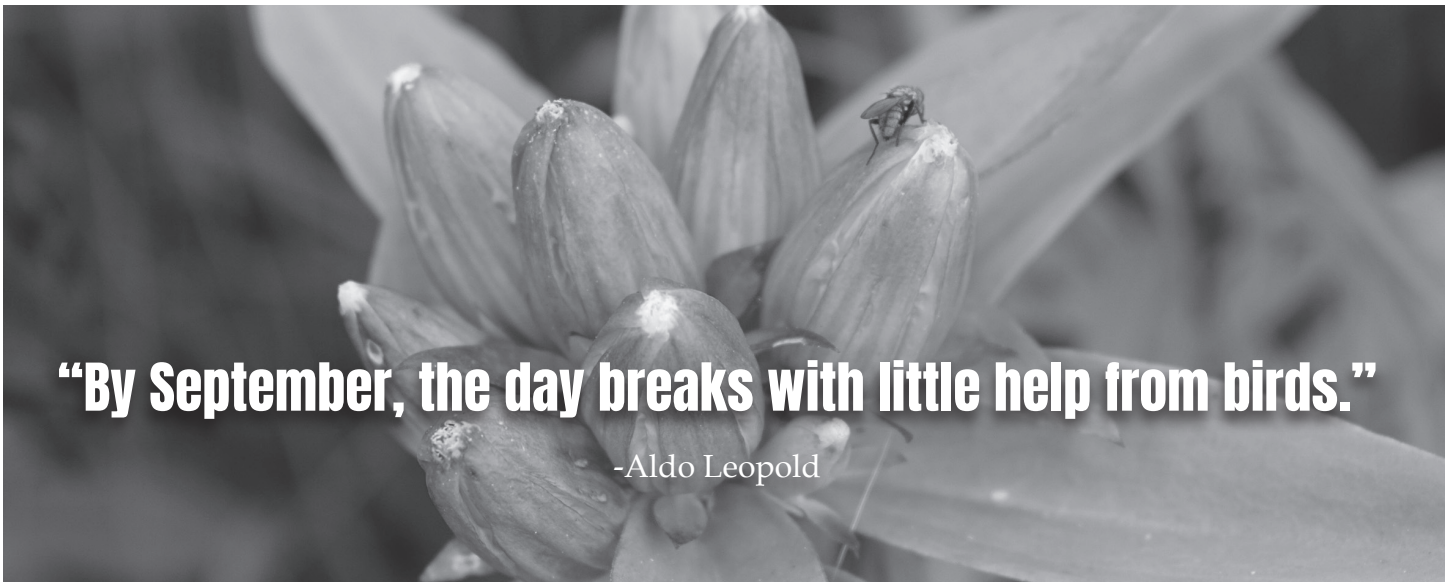


Photo by Peter Gorman

BMAPNEWS

The Blue Mounds Area Project Newsletter is published three times yearly.
We welcome your comments, submissions and advertisements.
Newsletter editor: Grace Vosen (newsletter@bluemounds.org) Graphic Design: Tom Senatori
www.bluemounds.org

IS YOUR MEMBERSHIP UP TO DATE?

BMAP maintains a calendar year membership cycle. If you are receiving a complimentary copy of the newsletter, please consider becoming a member.