BMAP
BLUE MOUNDS AREA PROJECT

November 2025: Blue Mounds Area Project eBulletin

Conservation and Community. Together.

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Outreach Ecologist's Updates

Sam Anderson

Hello BMAP,

Now that the leaves are gone, we can once again see through our woodlands, surveying all of the work we've done and work yet to do! As we finish collecting seed, wrapping up fall burns, or stocking up our bird feeders, it's a natural time of reflection. It's a great time to record our progress, repair our equipment, and take advantage of the shorter days to rest a bit more!

Asclepias hirtella - Credit: Sam Anderson

The 'dormant season' can also be quite busy. Many of us look forward to cold, damp days to cut invasive shrubs, work with the chainsaw, and burn brush piles. The BMAP Board is also stays active through the winter. Board members organize speakers, write for the newsletter, plan events, maintain the treasury, and more! If you are curious about our organization or interested in advancing our mission, consider volunteering to join the BMAP Board of Trustees. Just contact BMAP Board President, Greg Jones or BMAP Outreach Ecologist, Sam Anderson if you're interested or have any questions about Board membership.

The 2025 season for site visits has officially ended, but the schedule for 2026 is already starting to fill up! Just fill out BMAP's Site Visit Questionnaire to let us know you're

Winter Conversations, or Walks with a Naturalist, consider an additional donation to BMAP. so we can continue serving the SW Wisconsin region.

Just because the growing season is done doesn't mean that restoration work ends. I am always happy to communicate via email or over the phone if you want to discuss winter land stewardship, prescribed fire, or plans for greener months.

Don't forget your blaze orange this week!

Sam Anderson
Outreach Ecologist
ecologist@bluemounds.org

BMAP Membership Renewal

As the year comes to an end, make sure your BMAP membership is up to date! BMAP is entirely funded by the commitment and generosity of our members, making every donation and membership extremely important to our organization.

BMAP has a range of membership options to match your commitment to our mission and community. Thank you for your continued support!

You can also help BMAP by recommending our organization to your friends, family, and neighbors. By serving more landowners and managing more acreage, we multiply the dividends of our land management. This helps us further our goals of supporting private land restoration and continue to build the restoration community in SW Wisconsin. Don't hesitate to spread the word!

BMAP on Facebook

The Blue Mounds Area Project Facebook page is a good place to find information about upcoming events, but it's a one-way flow of information. Did you know we also have a Facebook group? Joining the BMAP Facebook group is a great way to connect with other BMAP members. To facilitate engagement, we'll soon begin posting regular conversation starters.

At any time you can also post:

- **Restoration-related questions**
- **Requests for help with burns**

- **Photos of what's growing in your prairie or woodland**
- **Anything else that relates to ecological restoration in WI**

To join the group, visit the group and click Join Group. The group is open to all landowners and allies in the Driftless Area of WI or surrounding areas who are working to restore native biodiversity and ecosystem health.

Upcoming BMAP Events

Grey Treefrog (*Hyla versicolor* complex) - Credit: Sam Anderson

BMAP Winter Conversations

While we take a hiatus from outdoor events, BMAP's Winter Conversation series starts up again in the new year!

Thursday, February 12
Multifunctional Agriculture & Agroforestry Systems
Jacob Grace - Savanna Institute
Join a representative from the Savanna Institute to hear about their approach to agroecology, perennial woody crops, and fostering productive and diverse landscapes in Wisconsin

Thursday February 26
Woody Shrubs of Southern Wisconsin
Peter Marshall
Shrubs provide habitat, floral resources, fruits and nuts, and many other ecosystem services in Wisconsin. Hear about the diversity of woody shrubs in Wisconsin that you can readily incorporate into your gardens or acreage.

Thursday, March 12
The Driftless Trail
Barb Barzen - Driftless Area Land Conservancy
The Driftless Area Land Conservancy is integral to conservation and restoration in south eastern Wisconsin. Join us to hear about all that DALC does, and the plans DALC has for expanding land restoration and land access in our region.

In case you missed our 2025 Winter Conversations:

Restoration at the former Badgerland Munitions Property
Sauk Prairie Conservation Alliance
Hear from a representative of the Sauk Prairie Conservation Alliance about their efforts in the former Badger Army Ammunition Plant, including management goals, progress, and highlights.

Coyotes in Our Grasslands
Carl Anderson
Learn about coyotes' behavior and impacts on grassland communities in southern Wisconsin. Gain a better perspective on the importance and complexity of Wisconsin's most abundant wild canine.

Garlic Mustard: Natural History and Management
BMAP President Greg Jones & BMAP Outreach Ecologist Sam Anderson
Join our presentation on the natural history and science behind Garlic Mustard, and how WI landowners manage the invasive species in their woodlands.

Partridgeberry (Mitchella repens) - Photo Credit: Brooke Lewis

Know of a local event that might be of interest to BMAP Members? Send the information to ecologist@bluemounds.org

Southern Driftless Grasslands Events

SDG is an excellent organization dedicated to the regional stewardship of our water, farms, and grasslands. Consider attending a pasture walk to see how agriculture and conservation intersect!

Ice Age Trail Alliance Events & Workdays

If you are looking to get to know the natural communities of southern WI or are hoping to build skills in land management, the IATA has a weekly hikes and workdays in the Blue Mounds area throughout April and May.

Dane County Parks Events

Dane county parks has a whole host of educational events and restoration workdays for folks interested in enjoying and restoring grasslands and woodlands.

UW-Extension Forestry (within the Natural Resources Institute) offers classes and events all year long. The Learn about your Land on-line courses are particularly focused on providing landowners resourcse and connections to agencies, non-profits, and community groups.

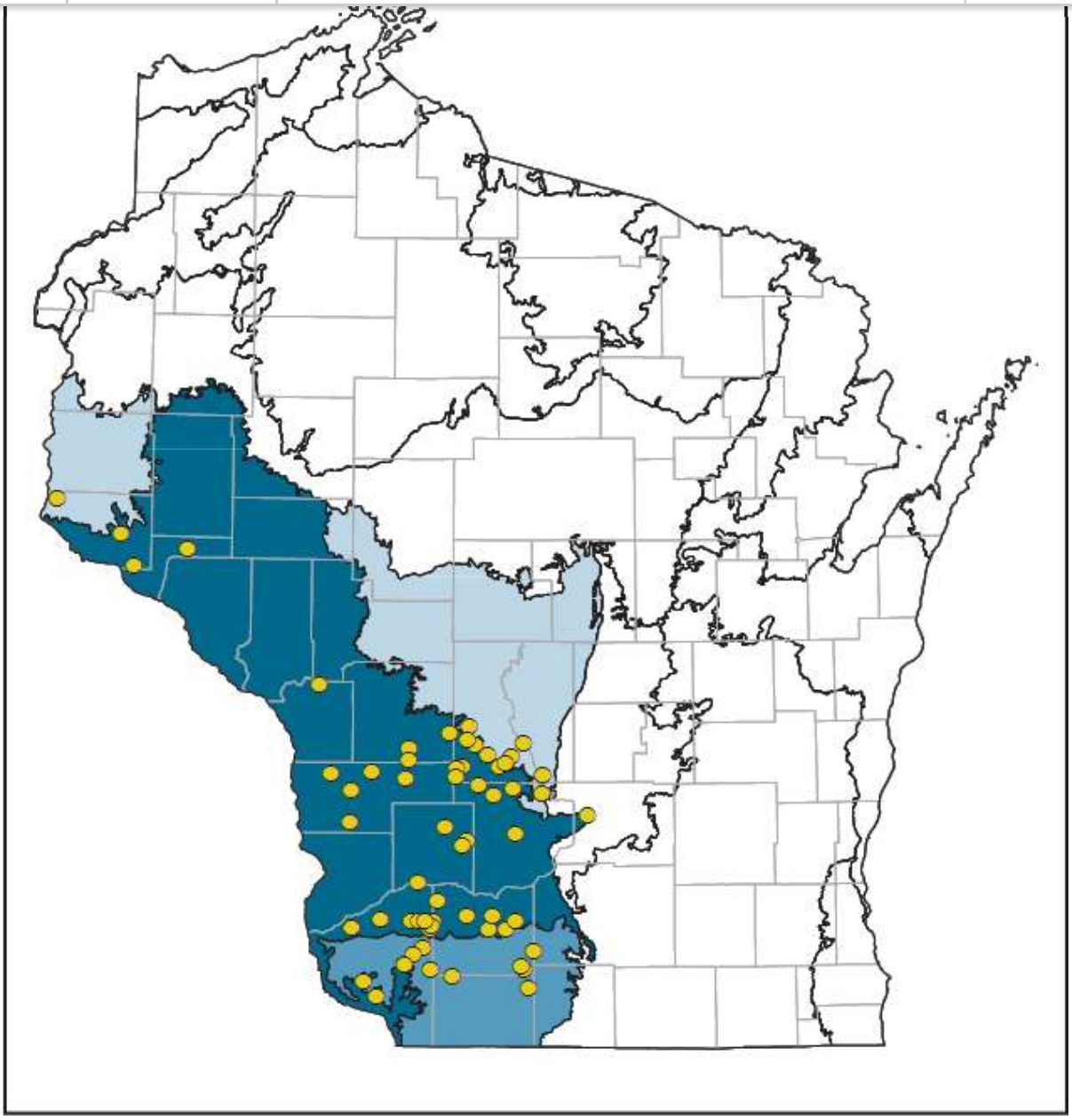
Naturalist's Notebook

Pine Relicts in the Driftless

A White Pine (Pinus strobus) seedling at Gibraltar Rock State Natural Area; Photo Credit: Sam Anderson

For most Wisconsinites, pines are associated with the Northwoods, where lumberjacks set upon vast swathes of old-grown pine in the 1800's and modern foresters continue to harvest of white and red pine today. While pines are a more dominant member of the canopy in more northerly forests, you can still see clusters of pines dotting many of the hilltops throughout

Far from random, these small populations are actually relicts of Wisconsin's glacial past and important pockets of biodiversity in our region. Often less than 10 acres in size, these plant communities break up the woodlands and grasslands of our region and offer a chance to see some plants that seem more reminiscent of the Northwoods. Pollen records reveal the presence of pines in the Driftless at least as far back as 10,000 YA, when the Driftless was a refugia protected from the glacial advancements that pushed through Minnesota and south-eastern Wisconsin. Wisconsin has three native species of pines: white pine (*Pinus strobus*), red pine (*Pinus resinosa*), and jack pine (*Pinus banksiana*). While each of these species has its own physiology and ecology, they often co-occur and grow in similar sites. Despite this, white pine tends to be the most common in the Driftless. An important part of our flora, pines and pine relicts are found only when particular conditions are met.



(a map of major Driftless pine relicts. Photo credit: WDNR)

Substrate & Topography

Pine relicts are most often found on steep slopes that overlay exposed sandstone or dolomite. The thin, sandy soils were noted in the first official surveys of pine relicts, with ecologists hypothesizing that pines have an adaptive advantage over more common broadleaf deciduous trees in such dry, nutrient poor conditions. Some notable pine relicts in south-central Wisconsin include the Ridgeway Pine Relic State Natural Area, Pine Hollow State Natural Area, and Governor Dodge State Park. Relicts tend to occur on bluffs or cliffs near riverways and valleys that were the result of erosion following glacial recession.

A mature white pine growing at the base of Gibraltar Rock near Lodi, WI. credit: Sam Anderson

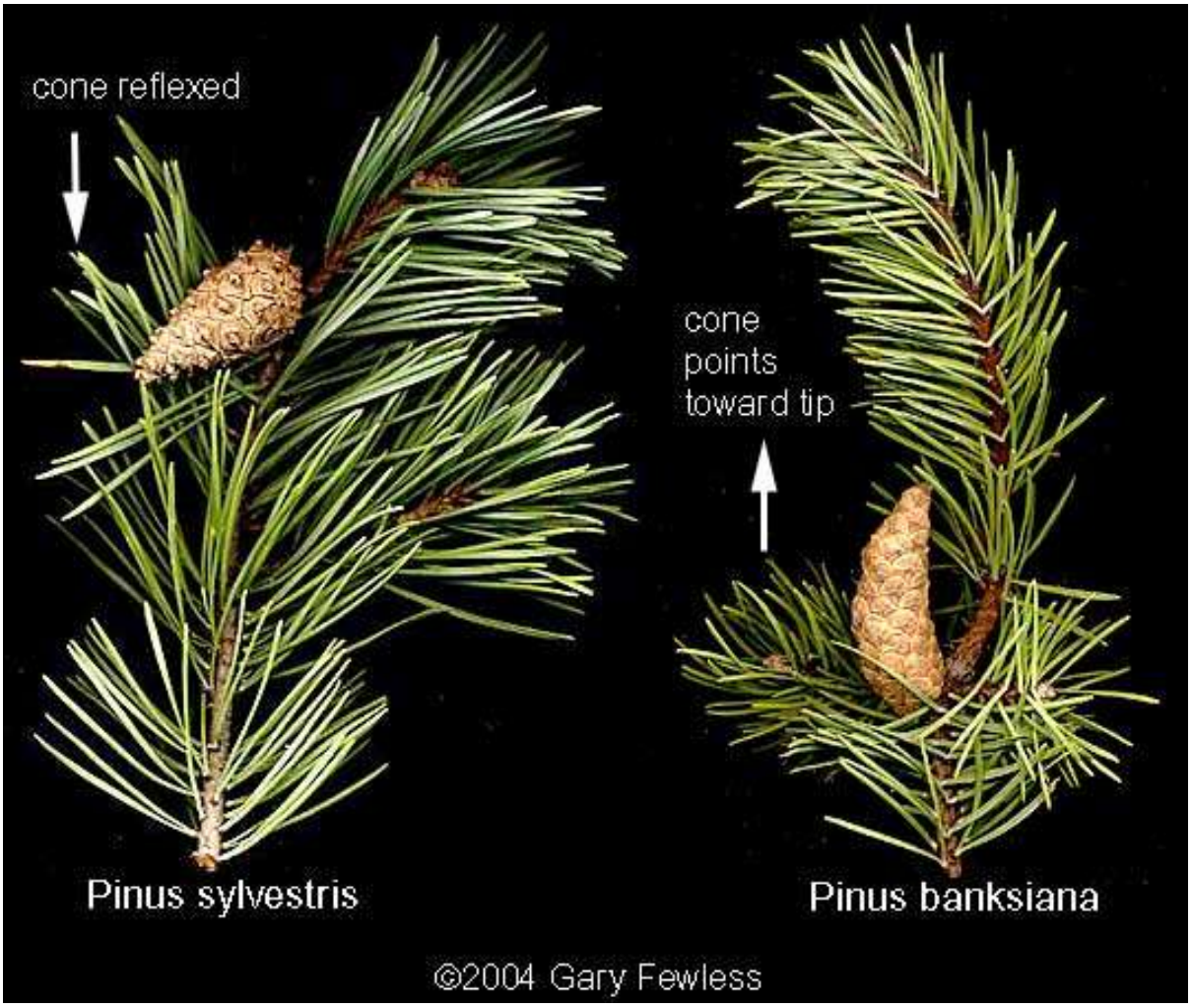
However, we can still find pines growing naturally in other environments in southern WI. The sand barrens and sandy deposits of the Wisconsin River valley can foster pine communities, especially if they haven't received regular prescribed fire. In fact, you may have noticed extensive plantings of pine throughout the lower Wisconsin River valley,

such as the quartzite throughout the Baraboo Hills. Examples of these communities can be seen at Devil's Lake State Park, Baxter's Hollow State Natural Area, or along Hwy 12 in Sauk County as you drive North towards Baraboo.

White pine growing amongst the quartzite outcroppings of Devil's Lake State Park near Baraboo. Photo credit: Wineinger

flora has adapted to this disturbance. We are familiar with fire tolerant oaks, with their thick bark and resprouting after intense top-killing fires. Prairie flora like prairie dropseed or little bluestem are also fire adapted, keeping their meristematic tissues that resprout at or below ground level.

Pines can have complicated relationships with fire. Like most conifers, pines don't have the ability to resprout from their trunk in the event of fire, browsing, or damage. Secondly, seedlings, saplings, and young trees have thin bark and are extremely sensitive to fire. Often only larger white and red pines will survive fire, though even old trees can suffer life-long damage. That being said, pines still have some adaptation to fire. Jack Pine in particular relies on fire to complete its life cycle. Jack Pine produce serotinous cones that only consistently open after exposure to fire/high temperatures. While these fires can kill the adult tree, they allow the next generation to germinate.



A branch showing the serotinous cone of Jack Pine (right) and a non-native pine with similar characteristics (left). Photo credit: Gary Fewless & the UW-Green Bay Herbarium

fire historically when compared to other plant communities like prairies or savannas. Many pine relicts, such as those seen at Governor Dodge or along the bluffs of the Wisconsin River valley, occur on outcroppings, cliffs, or on peninsulas or leeward sides of lakes and rivers that naturally prevent fire from propagating or encroaching. In this way, topography and fire interact to foster the conditions suitable for pine relicts to persist.

Flora

The topography, soils, and fire ecology that promote pines at pine relicts also favor several other native plant species. The overstory can often include black oak (*Quercus velutina*), paper birch (*Betula papyrifera*), hickories (*Carya*), red maple (*Acer rubrum*), and basswood (*Tilia americana*). More uncommon trees like musclewood (*Carpinus caroliniana*), ironwood (*Ostrya virginiana*), and mountain ash (*Sorbus spp.*) can also appear. Shrubs like lowbush blueberry (*Vaccinium angustifolium*), velvet-leaf blueberry (*Vaccinium myrtilloides*), huckleberry (*Gaylussacia baccata*), prickly ash (*Zanthoxylum americanum*), and dewberry (*Rubus flagellaris*) are common in relicts, while evergreen sub-shrubs like pipsissewa (*Chimaphila umbellata*), wintergreen (*Gaultheria procumbens*), and partridge berry (*Mitchella repens*) can also be found. With the rocky cliffs and exposed bedrock, many species of ferns, mosses, and other non-vascular plants like hornworts are also common in the understory of pine relicts.

A few examples of rock polypody (Polypodium virginianum) and Dryopteris growing in the rocks and pine duff of Gibraltar Rock SNA. Photo credit: Sam Anderson

Especially in our region, some prairie and woodland species can be found in pine relicts, making for an interesting community composition that often includes aspects of dry prairies or dry oak woodlands. Plants like wild columbine (*Aquilegia canadensis*), harebell (*Campanula rotundifolia*) and American hazelnut (*Corylus americana*) are often

Management Considerations

While some plant communities like restored prairies or oak woodlands require consistent management to address invasive species and promote prescribed fire, pine relict management is a bit more laissez-faire. Historically, pine relicts were vulnerable to logging, with some populations like Pine Island Wildlife Area being almost entirely extirpated. Being small and isolated, stand-level interventions or disturbances in pine relicts have the chance to severely impact vulnerable populations of uncommon plants. Since pine relicts rely on particular substrate conditions and topography, make sure you are not seriously altering these aspects of the community or property with major roadways or development. Likewise, the application of prescribed fire depends on the specific plant community and larger context of each pine relict, so any burning should be done in collaboration with professional contractors, ecologists, or state/federal agency representatives.

The thin soils and steep slopes of pine relicts can make it difficult for non-native species to establish, often making invasive species management a minor issue in most pine relicts. Some invasive species like Spotted Knapweed or Garlic Mustard can occur within pine relicts, but the management needed to control these populations is typically minimal. Poison ivy (*Toxicodendron radicans*) and dewberry (*Rubus flagellaris*) can become fairly abundant in these areas, so some cutting may be needed for comfortable access. Some landowners prefer to keep shrub or red cedar (*Juniperus virginiana*) cover to a minimum to ensure they can enjoy scenic overlooks. Just be wary, red cedars growing on cliffs in the Driftless can be some of the oldest trees in our state!

Conclusion

Pine relicts don't make up a major portion of our flora in the Driftless, but their connection to geology, topography, and fire make them as much a part of the region as our grasslands and oak woodlands. If you are looking for some greenery this winter, consider a field trip to a pine relict!

Find more resources on our website

Questions? Send us an email

Renew your membership

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