

# Kelseya

Newsletter of the Montana Native Plant Society



*Kelseya uniflora*  
ill. by Bonnie Heidel

## Exotic perennial grasses are abundant in Montana. *Is that OK?*

*By Matt Lavin, Plant Sciences and Plant Pathology, Montana State University*

**T**he war on weeds rarely targets exotic perennial grasses. Montana's noxious weed list includes only three grasses — common reed, medusahead, and ventenata — and only common reed is perennial.

A lack of concern over the abundance of exotic perennial grasses is surprising because these grasses dominate the plains and foothill landscapes throughout Montana, including along riparian corridors, on rangeland, and in understory settings. This is the case in both eastern and western Montana. The most abundant of these are creeping bentgrass, creeping foxtail, crested wheatgrass, Kentucky bluegrass, orchardgrass, quackgrass, smooth brome, tall oatgrass, and timothy, (e.g., Weaver and others, 2001; Lavin, unpublished data).

These exotic perennial grasses are superabundant wherever humans are actively impacting the landscape, which is to say — much of Montana. At low to middle elevations, exotic perennial grasses can be as abundant and widespread as the most common native perennial grasses, which include bluebunch wheatgrass, blue grama, Idaho fescue, needle-and-thread, prairie junegrass, Sandberg bluegrass, and western wheatgrass.

Where human impact is high, such as roadsides, pastures, overgrazed rangeland, and riparian corridors, exotic perennial grasses outcompete native perennial grasses. Once they become dominant, exotic perennial grasses are impossible to control at landscape levels. With some local-scale exceptions for crested wheatgrass and smooth brome, efforts to eradicate exotic perennial grasses are uncommon.



Exotic grasses — primarily smooth brome, quackgrass and Kentucky bluegrass — dominate the open and understory vegetation in early June along the riparian corridor of Mathew Bird Creek in Bozeman, and continue to do so at many low to mid-elevation sites like this throughout the growing season.

Photo by Matt Lavin



# Chapter Events

## Calypso Chapter

Info: Catherine Cain at 498-6198, [nativeplants@montana.com](mailto:nativeplants@montana.com).

## Clark Fork Chapter

Info: Anne Garde at 721-7627, [anniegarde@yahoo.com](mailto:anniegarde@yahoo.com)

The Chapter hosted two virtual field trips in May: Tarn Ream talking about Trillium and her long-term research project, and Clare Beelman and friends visiting Milltown State Park for National Wildflower Week. Check out these links and enjoy!

### Tarn Ream-Trillium

<https://www.youtube.com/watch?v=JBtQyEe9aTU&feature=youtu.be>

### Clare Beelman

<https://www.facebook.com/MilltownStatePark/videos/270983254287975/>

**Thursday October 8, 7:00 p.m.** (This event may be cancelled due to Covid-19 restrictions. Please check the MNPS or Natural History Center website for updates.) Douglas fir is the most widespread and abundant North American tree. Steve Arno and Carl Fiedler have a new book on this living legend. Come listen to them talk about "Douglas fir: The Story of the West's Most Remarkable Tree." Montana Natural History Center, 120 Hickory St. (*note different location*).

## Eastern At-Large

Info: Jennifer Lyman at 860-0223, [jenclyman@gmail.com](mailto:jenclyman@gmail.com).

## Flathead Chapter

Info: Tara Carolin at 260-7533, [mnps.flathead@gmail.com](mailto:mnps.flathead@gmail.com).

**Date & Time TBA. Huckleberry Phenology Training.** (This training is on hold; stay tuned or contact the email below for updates.) Huckleberries are an important food source for all wildlife, including grizzly bears. Glacier National Park is collecting data to understand how weather and other factors influence the phenology, or timing, of berry ripeness. Join research ecologists to learn how you can contribute to this unique citizen science program. Info: call 888-7986 or email [glac\\_citizen\\_science@nps.gov](mailto:glac_citizen_science@nps.gov).

**Saturday, August 1, 9:00 a.m. Flowers, Fire, and Photography.** (Rescheduled from June 13.) Join Steve Wirt, USFS forester and fire manager, to explore tranquil Howe Lake. You'll view some of Glacier National Park's most beautiful flora, learn about the park's ecology, and capture all the beauty through a lens. Registration is required and limited to eight people. MNPS member-only registration through July 25; open to the general public after that. Meet at the Apgar Visitor Center, GNP. Info: Steve at 261-2542, [wirtland@yahoo.com](mailto:wirtland@yahoo.com).

**Wednesday, July 22, 10:00 a.m. Glacier National Park Weed Blitz.** (This event may change; stay tuned or email below for updates). Join fellow citizens in removing invasive plants from priority sites in Glacier National Park. Park biologist Dawn LaFleur will train participants on identification and effective hand-pulling techniques for targeted weed species. The morning will focus on learning about invasive plant ecology, issues, and identification. We will head into the field during the afternoon. Bring some muscles, water, and gloves. Lunch will be provided by the Glacier National Park Conservancy. Meet at the GNP Native Plant Nursery. Info and to RSVP by July 15: call 888-7986, or email [glac\\_citizen\\_science@nps.gov](mailto:glac_citizen_science@nps.gov).

**Sunday, July 26, 8:00 a.m. Wedge Mountain, Whitefish Range.** Stroll across the high limestone ridge of Wedge Mountain, with stunning views into Glacier National Park and Canadian wildlands. We will learn about fire ecology and wildflowers in the 2003 burn area. Less than three miles round trip, 500 feet of elevation gain, but the hike is all off trail. Co-sponsored with the Montana Wilderness Association. Participant numbers are limited and registration is required at [wildmontana.org/walks](http://wildmontana.org/walks), opening June 29 for MWA members and July 2 for the general public. Meet at Super 1 Foods, Columbia Falls. Info: Rachel Potter at 892.2446.

**Thursday, August 6, 6:00 p.m. Landscaping with Native Plants.** Join Shiva Solaimanian, landscape/graphic designer for Forestration and the Center for Native Plants, for a landscaping 101 presentation. She will discuss such concepts as site analysis, site design, and planting design. Participants will be able to explore the Center's nursery and dive into plant selection based on varying bloom times, colors, textures, habitat, or pollinator benefits. Several small mock-up gardens will be available for viewing at the nursery to showcase different planting and surfacing ideas. Bring a notebook, pen, and camera. Stay tuned for registration details.

## Kelsey Chapter

Info: Bob Person at 443-4678, [thepersons@mcn.net](mailto:thepersons@mcn.net).

## Maka Flora Chapter

Info: Bob Srygley at 488-6086, [robert.srygley@usda.gov](mailto:robert.srygley@usda.gov).

## Valley of Flowers Chapter

Info: Beth Madden, 224-1012, [bethmadden64@gmail.com](mailto:bethmadden64@gmail.com).

During 2019, the Chapter hosted eight summer field trips in the Gallatin Valley and nearby. Two of these were native landscaping tours and very well attended. In the fall we held our second annual Plant Trivia night at Map Brewing Company – again a

very popular event. During the winter we held monthly lectures and workshops at MSU, until late March when the pandemic closed campus.

Our biggest project during the past year was organizing the 2020 MNPS state membership meeting, which ultimately was cancelled due to coronavirus concerns. This grand event had been slated for July 3-5, 2020 at the J Bar L Ranch in the Centennial Valley. We did hold a Raffle-by-Mail event to get in at least some fundraising and award the great prizes that had been donated by local businesses and individuals. The VoF Chapter also donated \$500 to the Craighead Institute for the Montana Murals project that highlights our threatened and endangered species through artwork in the city of Bozeman.

The Chapter is hoping to organize some 2020 summer field trips, with physical distancing guidelines and small group sizes. Any event plans will be emailed to members and posted on our Facebook page at <https://www.facebook.com/MNPSValleyofFlowers/>. Or contact Beth at [bethmadden64@gmail.com](mailto:bethmadden64@gmail.com).

## Western At-Large

Info: Kris Boyd at 295-9414, [boyd.kristina@yahoo.com](mailto:boyd.kristina@yahoo.com).

# A Plug for iNaturalist

By Tait Sougstad

[MNPS President Gretchen Rupp yielded her Platform this issue to make room for the following opinion piece and call-to-action by Sougstad, a Billings-area naturalist in his third botanical field season. — Ed.]

## MONTANANS ARE BUILDING A

**TELESCOPE.** It's not a telescope that can see distant stars and galaxies, but one that can help us see natural phenomena unfolding across our landscape. Every day, people across the state — and the world — are using the online platform iNaturalist to share photos and information about organisms they observe and to help each other identify them.

Each observation represents so much. It is a data point for scientists to use in research. It contributes to a living field guide that doesn't rely on aggregations and generalizations to give pictures, descriptions, and maps, but rather on what people are actually seeing in the world right now. It is a contribution to a growing database of pictures used to teach a powerful image-recognition tool to help users identify specimens. Most importantly, it is the record of someone's noticing — taking time in our breathless, phrenetic world to take pleasure in the great treasure hunt under the Big Sky.

When I can't get outside, I can still see what people are finding across the state. iNaturalist has a global scope, but a feature on the website and app lets users filter by location and taxon, and either browse observations on a map or see a list of the most recent ones posted. The latter is like a social media feed for nature, showing the harvest from curious people statewide. I know Spring has come, not by the designation on the calendar, but by the first post of a yellow fritillary. The telescope gives me a window.

But, there is a problem with Montana's iNaturalist scene: the most experienced naturalists in the state are conspicuously absent. Their photos seem to be sequestered in Facebook and Flickr groups, or tucked away in shoe boxes and hard drives, where they do not contribute to the Global Biodiversity Information Facility or the Montana Natural Heritage Program databases and can't be found, studied, or enjoyed for generations to come. Where are they? Where are the thousands of smart phone-packing kids in nature education programs? Where are the environmental science students in colleges across the state? Where are the nature nerds, enthusiasts, and conservation workers? Where are the native plant society members? At the time of writing, iNaturalist hosts 38,000 plant observations in Montana; 20,000 of those observations are waiting for someone to identify them.

The year 2020 has taught us that virtual community is no proxy for face-to-face interaction. However, iNaturalist represents an opportunity for anyone, regardless of their experience, to have an immediate, meaningful engagement with nature. It also represents an opportunity for nature organizations to have an immediate, meaningful engagement with those people.

In the previous issue of *Kelseya* the question was posed, "How can the MNPS reach out in creative ways?" I propose that one of the best avenues is through iNaturalist. Members can contribute their photos from field trips, either by uploading camera images to [iNaturalist.com](https://www.inaturalist.org) or by using the very simple iNaturalist app on their phone. They can lend their experience and help other users identify observations and become more botanically literate. The Society and Chapters can host Botanical Big Years, as the Illinois Native Plant Society has done, or coordinate smaller bioblitz events and nature meetups. They can help link casual observations to scientists in academia and conservation management agencies. In short, they can help build the telescope.



Tait and Elissa Sougstad



# MNPS News

## SMALL GRANT REPORT

### Native Plant Conservation in the Yaak Watershed

By Claire Walpole, Yaak Valley Forest Council

**T**he Yaak Valley, the most northwestern valley in Montana, is a lowland interior temperate rainforest, encompassing some 400,000 acres of largely U.S. Forest Service land (97%). It is located within the 2.2 million acre Kootenai National Forest and bordered by Idaho and British Columbia. The wild Yaak River flows through the valley and, as a nexus of maritime and interior climates, the valley hosts an enormous and virtually intact suite of northwestern flora and fauna.

The Yaak Valley Forest Council (YVFC) is a positive and practical community conservation organization that has worked for 23 years to promote the preservation and connectivity of the complex habitat types that exist in this belt of rainforest. Each summer our field crew works on the ground to accomplish the objectives of our Headwaters and Forest Watch programs; the projects funded by the Montana Native Plant Society and described in this article are among several undertaken through our Headwaters program.

The YVFC Headwaters program partners with the U.S. Forest Service (USFS) in long-term efforts to promote revegetation of native plants through weed abatement in the Yaak watershed. Our projects are implemented by annual fieldwork that includes hand pulling; non-toxic weed spraying with a mixture of Epsom salts, citric acid, clove oil and dish soap; and installation of weed mat to discourage growth of invasive species such as hawkweed, oxeye daisy, Canada thistle, spotted knapweed, reed canary grass, and St. John's wort. Native plant revegetation is encouraged by weed abatement and re-planting with native grasses. The field crew's accomplishments on this project during the summer of 2019 are described below:

#### North Fork, South Fork, and Upper Ford Yaak Weed

**Abatement:** YVFC's field crew hand pulled weeds on three sites

totaling six acres and sprayed with our non-toxic herbicide. We also installed 1,500 sq. feet of additional weed mat on the Upper Ford site. The 9,000 sq. foot S. Fork weed mat installed in 2018 was left in place as we noted rhizome growth in some areas. We are seeing good response to our treatments with a significant decline in knapweed and a moderate response seen in hawkweed and thistle infestations.



Spraying for weeds with non-toxic herbicide.

**Blacktail Trail:** YVFC created and maintains trails along five miles of decommissioned roads on scenic Blacktail Creek in the Yaak watershed. We work to reduce invasion of non-native plant species along the trail so that revegetation of native plants can occur naturally and by the planting of native grasses. Our field crew hand pulled and sprayed weeds, primarily knapweed, hawkweed, and thistle, on 20 acres adjacent to Blacktail trail.

The YVFC Headwaters field crew also hosted Day Three of our 2019 youth watershed camp, demonstrating healthy and less-than-healthy streamside riparian areas, along with how to repair and preserve those vital areas and the adverse effects of noxious weeds.

We also partner with the USFS on our Terrestrial Habitat Restoration Initiative for Vegetative Enhancement (THRIVE), a long-term huckleberry shrub monitoring project to promote post-timber-harvest huckleberry restoration. Our THRIVE

project is a long-term cooperative project with Kootenai National Forest (KNF). There is little scientific information available on how or whether different timber harvest treatments affect the abundance of huckleberry brush, a major grizzly bear forage. So we created a monitoring plan in collaboration with the KNF and the USFS Rocky Mountain Research Station to help answer this question. Each year we conduct baseline surveys on monitoring and control plots on KNF timber projects. The plots will be re-visited every five years on rotation for the next 20-25 years to monitor the effects of treatment regimes on huckleberry shrub abundance. The object of the study is to determine which post-harvest fire treatments are the most effective in encouraging the growth of huckleberry brush. Since the inception of the

project we have established 41 survey and associated commensurate control plots within four units in the Buckhorn Project area in the Yaak Valley, and 120 survey plots and associated control plots within 12 units in the Sparring Bulls Project Area south of Troy, Montana, for a total of 161 survey plots in 16 units.

The baseline for the project essentially has been established. As we have completed only the first round of post-harvest surveys, this being the point with the most disturbance, and because plant/tree regeneration has a lag time, no conclusions can be made yet. An observation from YVFC'S field crew is that the lighter treatments that retain some shade/cover are showing healthier huckleberry and whortleberry crops, less shock overall, and far less individual bush mortality. As far as huckleberry regeneration post-management, we are expecting to see new growth or re-growth in the coming years.

During Summer 2019, YVFC's field crew completed 25 treatment and control plots, located within Unit 14 of the Buckhorn Project Area. This unit was over-harvested and over-burnt, leaving it in rough shape and making it the toughest THRIVE unit to work in to date, reducing the number of plots we were able to complete.

The YVFC is grateful for the support of the Montana Native Plant Society in these ongoing efforts.

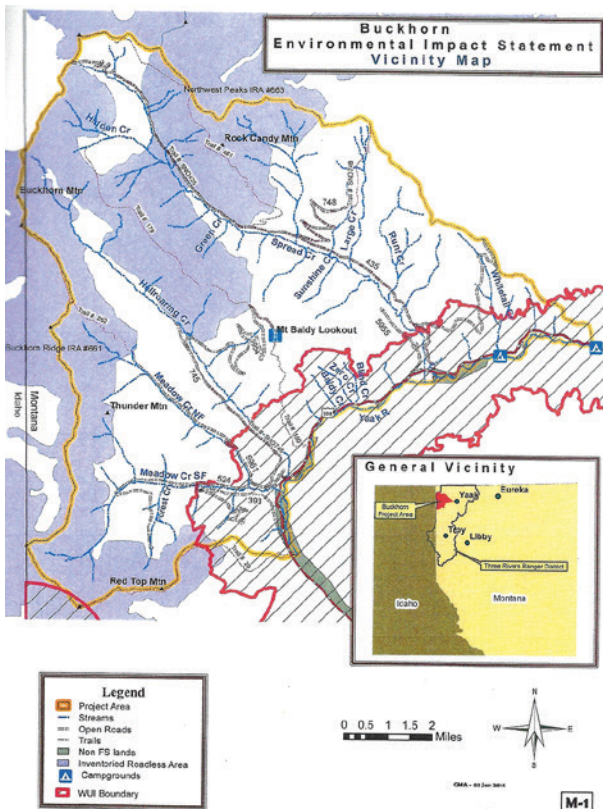


Photo by Matt Lavin

MNPS President Gretchen Rupp and Valley of Flowers Chapter members presented Cathie Jean with her award during a socially distant visit to her home on June 11.

## Cathie Jean *Most Worthy of Outstanding Award*

**C**athie Jean has given countless hours to the Montana Native Plant Society for nearly two decades, particularly in two leadership roles.

First, she chaired the Small Grants Committee from 2002 through 2009. In that role, she was instrumental in awarding more than a dozen Small Grants to local native plant gardens, as well as a number of university-based research projects. She then stepped into the role of Membership chair, working tirelessly from 2009 until a year ago. Membership is a big job. Cathie ushered in the transition to digital newsletters and the option of paying membership dues for more than one year at a time, which has been extremely successful. She recruited Marirose Kuhlman and then Sasha Victor to manage the database. She worked closely with Co-Treasurers Jenny Tollefson and Shannon Kimball to make the membership process run without hiccups. And finally, when it was time to turn over the reins to a successor, she collaborated closely with Maria Mantas for a smooth transition.

Both of these roles involved serving on the Board and attending meetings several times a year – for 18 years!

Cathie also has contributed to our Valley of the Flowers Chapter, by attending planning sessions for lectures and field trips and organizing the state meeting when we hosted it. For all this, Cathie is more than deserving of our Society's highest award, the Outstanding Service Award.

## Whitebark Pine Conference Pushed to 2021 2020 Virtual Offering

Due to difficulties stemming from the COVID-19 pandemic, the Whitebark Pine Ecosystem Foundation (WPEF) has postponed the 2020 High Five Conference until October 5-7, 2021. In lieu of an in-person conference this year, WPEF will host a virtual science meeting on September 16, 2020 that is open to all interested members and whitebark pine enthusiasts. Our wish is that you stay healthy, and we feel this action will help reduce everyone's exposure to the virus.

The 2021 High Five Conference will take place at the same location – the Hilton Garden Inn in Missoula, MT – with the same great agenda, including workshops, meetings, and field trips.



Using ideas from Milanovic and others (2020), Schlaepfer and others (2011), and Sladonja and others (2018), ecosystem services provided by exotic perennial grasses could include controlling erosion, stabilizing soil, and preventing floods. They also could be sources of food (e.g., grass hay) or phytoremediation (the use of plants to clean up contaminated air, soil or water), especially along riparian corridors; provide sites for biodiversity to accumulate (assuming the absence of herbicide application); be used in traditional medicine (e.g., quackgrass); and enhance recreation by rendering savannah-like landscapes that humans instinctively prefer.

What are some possible negative ecological impacts (ecosystem disservices) of exotic perennial grasses? We could include the alteration of soil nutrients and habitats, and producing pollen that causes allergenic reactions here. Of these potential disservices, alterations of soil nutrients and habitats are likely a function first of human impact, which then allows exotic perennial grasses to become superabundant.

Therefore, the ecosystem services provided by exotic perennial grasses may greatly outweigh any disservices. This could be why we generally do not worry about exotic perennial grasses dominating many Montana landscapes. Perhaps we should give noxious and other so-called weeds the benefit of accounting for and balancing their ecosystem services and disservices.

According to the literature cited above, ecosystem services of “weeds” could also include, serving as windbreaks and ornamentals, enhancing pollination and honey production, serving as sources of natural pesticides, and uses in cosmetics and medicine.

Regardless, grass species have evolved effective dispersal mechanisms such that today most grass species, whether native or exotic, are geographically



A spur trail along the riparian corridor of Mathew Bird Creek, photographed in late April. The green understory vegetation here is entirely exotic perennial grasses, which generally begin growing earlier than native grasses. It is likely a function of their nutrient-rich leaves with higher photosynthetic rates that gives exotic grasses a competitive edge over native grasses in growing earlier and faster (e.g., Broadbent and others, 2020).



Smooth brome dominates in this August photo, taken in Yellowstone National Park, along Highway 191 just south of the Fawn Pass trailhead with Divide Lake at the left. With its network of rhizomes, smooth brome has a high likelihood of stabilizing soil, minimizing erosion, and enhancing water quality of adjacent riparian corridors and wetlands. It is abundant where human activity has had a landscape-level impact in degrading native vegetation and allowing for continuous establishment of perennial exotic grasses.

Photos by Matt Lavin

widespread. Few grass species are imperiled. Grasses prosper in the face of human impact because humans both intentionally and inadvertently promote grass abundance. Thus, the Anthropocene should be defined to include the grass family as effectively using humans to enhance their abundance and diversity. 🌸

**LITERATURE CITED:**  
Broadbent, A.A.D, and others. 2020. Dominant native and non-native graminoids differ in key leaf traits irrespective of nutrient availability. *Global Ecology and Biogeography* 29: 1126-1138. doi:10.1111/geb.13092.

Milanovic, M., S. Knapp, P. Pysek, I. Kuhn. 2020. Linking traits of invasive plants with ecosystem services and disservices. *Ecosystem Services* 42: 101072. doi:10.1016/j.ecoser.2020.101072.

Schlaepfer, M.A., D.F. Sax, and J.D. Olden. 2011. The Potential Conservation Value of Non-Native Species. *Conservation Biology* 25: 428-437. doi: 10.1111/j.1523-1739.2010.01646.x.

Sladonja, B., D. Poljuha, and M. Uzelac. 2018. Non-Native Invasive Species as Ecosystem Service Providers. Chapter 3 in *Ecosystem Services and Global Ecology* (ed. Levente Hufnagel). doi:10.5772/intechopen.75057.

Weaver, T., D. Gustafson, and J. Lichthardt. 2001. Exotic plants in early and late seral vegetation of fifteen northern Rocky Mountain environments (HTs). *Western North American Naturalist* 61 (4): 417-427.

## SMALL GRANT REPORT

# FCD Demo Garden Off to a Great Start

By Hailey Graf, Resource Conservationist

**I**n our office at the Flathead Conservation District we are always trying to describe what healthy soil looks like, or how to stabilize a streambank with native vegetation, or how to plant a pollinator garden — but those concepts are difficult for many people to visualize. The Demonstration Garden project started with the intention of creating a space where we could provide hands-on learning about different conservation practices and have something to show people — an actual way to demonstrate it.

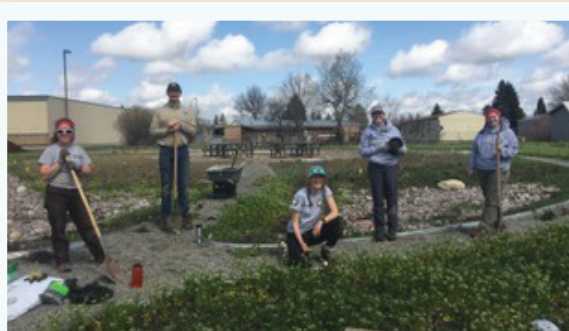
We started by finding a location that would work for our needs. Thankfully, we didn't have to look far as the owner of our office building allowed us to sign a long-term lease on the vacant property next door. The lot was full of noxious weeds and had terrible soil, but we figured we were up for the challenge. After all, we regularly provide landowners with the knowledge and tools for weed management and soil health!

We partnered with the Flathead County Weed Department to manage the noxious weeds overtaking the site. Following that, local companies volunteered their time and equipment to help with site grading and installation of walking paths and irrigation. After that we got to planting! In 2019, with the help of a Small Grant from MNPS, we planted a variety of native species to showcase different ecosystems found locally. We have an upland terrestrial area represented by many of our conifer trees, a native pollinator garden, and a rain garden that uses native, water-loving plants to filter pollution out of runoff before it enters storm drains. Unfortunately, during the planting we discovered that our soil was even worse than we anticipated. We quickly found that the previous owner had completely removed the topsoil and replaced it with fill material. As you can imagine, this made for back-breaking work digging out enough rocks to create space for each plant and backfilling with good soil.

This year we wised up and hired a landscaping company to pre-dig our holes using a mini excavator. We also planned a series of planting days, recruiting volunteers to help. At the end of April, five AmeriCorps members joined us to help. Enjoying one of the first nice days of spring (and still practicing social distancing guidelines) we added to the rain garden, planted a hedgerow/windbreak, and seeded a cover crop to improve our soil health and prevent weeds.

In 2019, we hosted several workshops focused on topics such as creating pollinator habitat, building rain gardens, and managing noxious weeds. This year we're excited to add additional workshops on soil health and gardening for water conservation. We also plan to install interpretive signs around the walking path and brochures at each of the different areas.

Slowly but surely the Demonstration Garden is taking shape. Now all we need to do is stay on top of the weeds and wait patiently for the native plants to grow. Many thanks to MNPS for helping us make this teaching space a reality. 🌸



Above: AmeriCorps Volunteers pose for a picture while practicing social distancing. Right: Native blue flax is a strong self-seeder, often used along highways and in reclamation areas because it can compete with noxious weeds.



Photos by Hailey Graf



## Gardener's Notebook

Using Native Plants in Backyard Landscaping

# Dotted Blazing Star

*Liatris punctata* Hook

By Denise Montgomery, Valley of Flowers Chapter

As the prairies, foothills, and roadsides begin to brown in high summer, rosy-purple dotted blazing star bursts on the scene. Also known as dotted gayfeather, *Liatris punctata* presents a dazzling display of clustered stems of starry flowers in July and August.

A member of the composite family, it is named *punctata* for the tiny glands dotted on the underside of the numerous linear leaves that emerge from between the flower-heads. Blazing star has a unusual appearance among the composites, as it does not have ray florets. Four to six disc flowers are clustered in flower-heads arranged along upright stems. The corollas of the disc flowers are elongated and deeply lobed, resulting in an overall feathery appearance (Strickler, p.32). Multiple stems arise from the crown. Flowers bloom from the top down, as on a fireworks sparkler.

Dotted blazing star is one of two native *Liatris* in Montana. It is widely distributed east of the Continental Divide from Alberta into Saskatchewan, south to Mexico, and on the Great Plains east into Nebraska and Missouri.

A star in the rock or pollinator garden, the nectar-rich flowers of *Liatris punctata* attract bees, butterflies, moths, and hummingbirds, and are especially valuable to bumble bees. Seeds are eaten by birds. Flower stems make great fresh-cut flower bouquets; cut just as the flowers begin to open. Stems also can be hung and dried, retaining their color for dried arrangements. Native peoples had a number of medicinal uses for the plant.

Do not dig *Liatris* from the wild; these deeply rooted plants rarely survive the move. Potted *Liatris punctata* plants are available from your trusted native plant supplier, usually in summer. Look for plants with good root development (but not rootbound). One- to two-year-old potted plants may not have a lot of top-growth, but it's the roots that count, though the leaves should look healthy.

**NOTE:** The commonly found *Liatris spicata* cultivars are not native to Montana. Planting native species is important for native pollinators, as cultivars generally do not provide the same nutritive value.



Dotted blazing star is a standout in the wild or in a garden.



Photos: Denise Montgomery

## Growing *Liatris Punctata*

**Light:** Full sun

**Soil:** Prefers dry, alkaline soil. Sandy loam is best, but it will do well in a well-drained perennial bed, provided it is not overwatered. Tolerates some types of clay soil, but not heavy clay or compacted soil.

**Moisture:** Plants grow eight to 16 inches high, taller with more moisture. The plant will thrive with some moisture in summer, becoming drought tolerant once established. Very fertile soils and excess moisture can cause the plant to be floppy; drier, leaner soils promote a more compact plant with sturdier stems.

**Spacing:** Plant about two feet from other perennials. I discovered that my dotted blazing star grew large and produced more flower stems each year, until I planted other perennials too close. The crowded blazing star diminished over the next couple of years, then fizzled out altogether. Properly spaced and not over-loved, *Liatris punctata* is quite long-lived.

**Companions:** Pussytoes (*Antennaria sp.*), penstemons (*Penstemon sp.*), little bluestem (*Schizachyrium scoparium*), Indian ricegrass (*Acanantherum hymenoides*), purple prairie clover (*Dalea purpurea*), fleabane daisy (*Erigeron compositus*), blanketflower (*Gaillardia aristata*), and others with similar water and soil requirements and plenty of room.

**Propagation from Seed:** *L. punctata* is relatively easy to grow from seed. For best results, collect\* seed from native plants in your area or sourced as locally as possible. In late summer to fall, plants develop numerous fluffy-topped seeds; use those that are fully-filled, firm, and stiff (Morrison, p.72). Sow seed outdoors in spring on sandy loam, barely cover, and water. Sown indoors, germination occurs in about one week at 70 degrees (without cold treatment), or two weeks at 40 degrees (Morrison, p.71). Seed can be broadcast outdoors in late summer/fall, though more may be lost to wind and birds. Broadcasting seed mixed with an equal amount of coarse sand helps to distribute seed more evenly. Plants bloom the second or third year, growing larger and producing more flower stems in successive years. Fertilizing or topdressing with manure is not necessary nor recommended.

**\* Practice ethical collecting:** Collect from private land only, with landowner written permission, or by permit from public lands; take only a very small amount (no more than 10%) from a large population. To maintain genetic diversity in a population, do not collect all of the seed from any individual plant; instead collect a very small amount of seed from a number of separate plants.

### RESOURCES:

Strickler, Dr. Dee. 1986. "Prairie Wildflowers Showy Wildflowers of the Plains, Valleys, and Foothills in the Northern Rocky Mountain States." Columbia Falls, Montana. The Flower Press.

Morrison, Sheila. 2003. "The Magic of Montana Native Plants, A Gardener's Guide to Growing Over 150 Species from Seed." Missoula, Montana. Missoula Native Plant Press.

Flanagan, Julie. 2005. "Native Plants for Prairie Gardens." Massachusetts. Fitzhenry & Whiteside Limited.

## WELCOME ABOARD!

*The Montana Native Plant Society welcomes the following new members:*

### Calypso Chapter

Mark and Ginger Garff,  
Karen Myers, and  
Kristine Philpott

### Clark Fork Chapter

Jeffrey Collins,  
Mary Ann Flockerzi,  
Natalie Greico,  
John Ligas,  
Sue Maffei,  
Amy Sacry,  
and Janet Sullivan

### Flathead Chapter

Cristina Eisenberg,  
Dean Marsh  
and Anita Ho,  
Christine Merriman,  
and Joyce Schutt

### Kelsey Chapter

Jessica Allewalt,  
Ellen Dodds,  
Fran Penner-Ray,  
Liz Poletti,  
Rebecca Skelton,  
and Camie Westfall

### Valley of Flowers Chapter

Meagan Dailey,  
Eileen Hosking,  
Jennifer Mohler,  
Heather & Jeff Musselman,  
Diane Renkin,  
and Marlena Renwyck



# Update on Woody Shrub Collecting

By Andrea Pipp and Ralph Scott

In the Winter 2019-20 *Kelseya*, we asked MNPS members to help with our efforts to revise a 1962 booklet "Winter Field Key to the Native Shrubs of Montana," by Morris, Schmautz, and Stickney. Several folks took a hike, snowshoe, or ski to collect twigs of particular species and sent them to Ralph Scott who photographed them. We greatly appreciate these efforts by Robert Wooley (Beaverhead County), Susan Hellier (Gallatin County), and Natalie Berkmen (Mussellshell County). Along with my own samples (Lewis and Clark County) we added another 16 shrubs and vines to the previous 41 species that have been photographed. The new species are:

Mountain alder: *Alnus viridis*

Speckled alder: *Alnus tenuifolia*

Sagebrush: *Artemisia nova*

Silver sagebrush: *Artemisia cana*

Basin big sagebrush:

*Artemisia tridentata* var. *tridentata*

Wyoming big sagebrush:

*Artemisia tridentata* var. *wyomingensis*

Rubber rabbitbrush: *Chrysothamnus nauseosus*

Western virgin's bower: *Clematis ligustifolia*

Winterfat: *Krashemnikovia lamata*

Syringa: *Philadelphus lewisii*

American black currant: *Ribes americanum*

Geyer's willow: *Salix geyeriana*

Black elderberry: *Sambucus nigra*

Greasewood: *Sarcobatus vermiculatus*

Greene's mountain-ash: *Sorbus scopulina*

White spirea: *Spirea lucida*

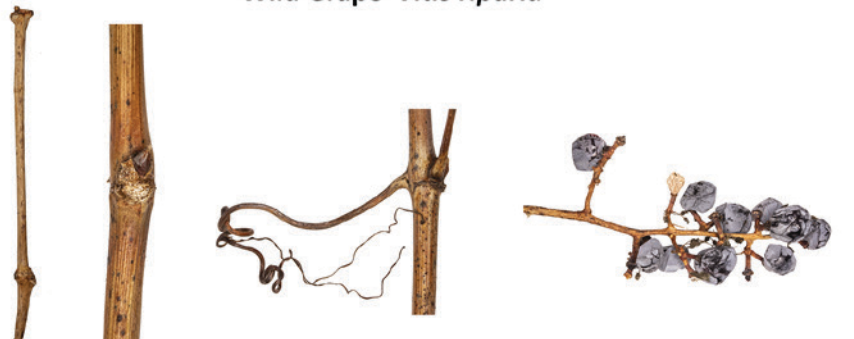
Given a nice assortment of photographed twigs, buds, and other structures, we now are in the process of seeking funds that will allow us to update ecological information, the botanical key, and other sections of this booklet. If you are interested in contributing specimens over the 2020-21 winter season, grab the species list from the earlier newsletter (or find it on the website, [www.mtnativeplants.org](http://www.mtnativeplants.org)) and take it on your next hike to locate a shrub, vine, or tree that you can come back to during the cold months. Meanwhile, here are a few of Ralph's amazing photos of previous contributions!

—Andrea Pipp is a botanist with the Montana Natural Heritage Program and Ralph Scott is a biologist and scientific illustrator.

## Russian Olive *Elaeagnus angustifolia*



## Wild Grape *Vitis riparia*



## Poison Ivy *Toxicodendron rydbergii*



*Prunus-virginiana*

*Populus-trichocarpa*

*Symphoricarpos-occidentalis*



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Your yearly membership fee includes a subscription to *Kelsey*, the quarterly newsletter of MNPS. We welcome your articles, field trip reports, book review, or anything that relates to native plants or the Society. Please include a line or two of "bio" information with each article. Drawings should be in black ink or a good quality photocopy. All items should be emailed to: [carokurtz@gmail.com](mailto:carokurtz@gmail.com) or mailed to *Kelsey* Editor, 645 Beverly Avenue, Missoula, MT, 59801.

Changes of address and inquiries about membership should be sent to MNPS Membership, P.O. Box 8783, Missoula, MT 59807-8783. Advertising space is available in each issue at \$5/column inch. Ads must be camera-ready and must meet the guidelines set by the Board of Directors for suitable subject matter; that is, be related in some way to native plants or the interests of MNPS members.

**The deadline for each issue is Fall–September 10; Winter–December 10; Spring–March 10; Field Trip Guide–April 10; Summer–June 10.** Please send web items to our webmaster concurrent with these dates.

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