

# Kelseya

Newsletter of the Montana Native Plant Society



*Kelseya uniflora*  
ill. by Bonnie Heidel

## *Small Grant Report:* Preparing their Home on the Range: Baseline Surveys for Bison Restoration

*By Nicolas Matallana-Mejia*



*Photo left: Blackfeet Community College interns work hard. From left to right: Justine Trombley and Ezekial Still Smoking (BCC interns).*

*Photo above: Blackfeet grassland plant communities*

I started the day off with a typical icebreaker: What is your favorite thing to do outside? The students went one-by-one: hiking, fishing, hiking, hiking... in the Blackfeet Tribal Nation, most folks have spent time outside. Except for one student. When it was her turn, she responded: "I don't like going outside, and actually I avoid it if I can." I mumbled "oh, that's okay", and moved on with the meeting, however on the inside I was immediately stressed. We were about to spend two months in the muggy, buggy meadows east of Glacier Park doing an intensive survey of grassland plant communities. How could I have ended up with a student that hates the outdoors? The largest font on the flyer I posted read "GET PAID TO WORK OUTSIDE", yet somehow, Justine, a stone-faced criminal justice major who was visibly uncomfortable outside, had accepted the job.

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- ∞ CPNWH database: improving data quality



# Chapter Events

## Artemisia Chapter

Info: Jessica Callahan at 507-696-5467; [artemisiamnps@gmail.com](mailto:artemisiamnps@gmail.com).

## Calypso Chapter

Info: Catherine Cain at 406-498-6198; [nativeplants@montana.com](mailto:nativeplants@montana.com) or Karen Porter at 406-498-9728; [karenwporter44@gmail.com](mailto:karenwporter44@gmail.com).

### Saturday, July 6 - Vipond Park - A Wildflower Extravaganza (Butte). 10:30 a.m. to 2:30 p.m.

Join Kriss Douglass on an auto tour of the lush subalpine meadows of the East Pioneers. Participants will carpool and several botanists will be available for plant identification. LEADER: Kriss Douglass. For details and to register contact Kriss at 406-782-9060 or [samjd@montana.com](mailto:samjd@montana.com).



*Penstemon lemhiensis*, regional endemic, photo by Matt Lavin

### Tuesday, July 9 - Gravelly Range Wildflower Tour (Ennis).

**9:00 a.m.** This annual tour offered by the Madison District, U.S. Forest Service, is a not-to-be-missed opportunity to immerse yourself in the abundant floral display of the Gravelly Range subalpine meadows. Registration not required. Meet at the Madison District Office, 5 Forest Service Rd. in Ennis at 9:00 a.m. High-clearance vehicles recommended. For more information contact the Madison District Office at 406-682-4253.

### Wednesday, July 10 - A Relict Floodplain Within a Degraded Stream Corridor (Butte). 6:00 p.m. to 8:00 p.m.

Explore this special locality in the Silver Bow Creek floodplain – a weed-free, ungrazed and almost undisturbed relict floodplain environment proximal to Silver Bow Creek near Ramsay, MT. See which native plants exclude the weeds in the Butte area. LEADER: Rich Prodgers. For details and to register contact Karen at 406-498-9728 or [karenwporter44@gmail.com](mailto:karenwporter44@gmail.com).

### Wednesday, July 17 (subject to seeding time) - How to Collect Native Plant Seed (Butte). 6:00 p.m. to 8:00 p.m.

Krystal Weilage, expert seed collector, will engage a small, very hands-on group in specific techniques for specific native plants. Bring your own collecting envelopes. Limit: five to seven. LEADER: Krystal Weilage. For details and to register contact Karen at 406-498-9728 or [karenwporter44@gmail.com](mailto:karenwporter44@gmail.com).

### Wednesday, August 7 - A Created Wetland Complex

**(Butte). 6:00 p.m. to 8:00 p.m.** Explore this unusual setting with ponds, seagulls, and a separate beaver dam along Silver Bow Creek south of Ramsay, MT. We will ID a few willows and sedges and possibly some birds, and discuss the origins of this wetland. Please wear rubber boots. LEADER: Rich Prodgers. For details and to register contact Karen at 406-498-9728 or [karenwporter44@gmail.com](mailto:karenwporter44@gmail.com).

### Sunday, October 20 - Dyeing with Native Plants (Divide) – A Hands-on Educational Workshop. 10:00 a.m. to 3:00 p.m.

Co-hosted with the US Forest Service, this workshop will guide participants in developing a dye notebook using various plant dye materials including lichens, acorns, bark, leaves, flowers and berries, and fabric samples including cotton/wool yarn, wool batting for felting and silk/cotton. Participants may also purchase a silk scarf to dye while samples are drying and notebooks are compiled. We will discover how different fabrics interact with different plants related to the pH of the dye. Limit 30. Materials fee TBD, paid at time of workshop. For details and to register contact Jessie at 406-660-0011 or [jessica.salix@usda.gov](mailto:jessica.salix@usda.gov).

## Clark Fork Chapter

Info: Teagan Hayes at 920-979-9009; [teagan.hayes@gmail.com](mailto:teagan.hayes@gmail.com) or Paul Buck at 970-901-2418; [paul7703@gmail.com](mailto:paul7703@gmail.com).

### Saturday, August 3 - Shoofly Meadows (Missoula) 9:00 a.m.

Join Peter Lesica to explore the botany of wetlands, forests and fens that compose Shoofly Meadows at the headwaters of Gold Creek, approximately a 25-mile drive from Missoula. We will meet and carpool from the east end of the Eastgate Shopping Center parking lot at 9:00 a.m. Please bring a lunch and shoes or boots for walking in shallow water. For more information and to register contact Peter Lesica at [lesica.peter@gmail.com](mailto:lesica.peter@gmail.com).

### Thursday, October 10, 7:00 p.m. Native Plants Year Round.

This talk will delve into a yearly plant care and maintenance calendar for native gardens. **Aimee Kelly with Great Bear Native Plants** will discuss special seasonal considerations such as plant selections for specific pollinators and fall interest.

## Eastern At-Large

Info: Kelsey Molloy at 406-654-4566; [kelsey88@gmail.com](mailto:kelsey88@gmail.com).

### Thursday, July 18 - Bitterroot Bloom on Yeager Flats

**(Choteau).** Dave and Genevieve Shea will lead this moderately difficult, five-mile round-trip hike through limber pine savannah, narrow-leafed cottonwood groves, sagebrush, Douglas-fir/Englemann spruce forest, and a portion of the Ear Mountain Fire, which was started by lightning strike in 2000. A great variety of shrubs, grasses, and forbs, including bitterroot and several orchids, grow in these habitats. Clark's nutcrackers and other birds are common and prairie falcons nest on cliff faces. This is also good mule deer, elk, mountain sheep, and black and grizzly bear country. We'll discuss some archaeology and history, as well as Rocky Mountain Front geology, wildlife and management issues. Come prepared for a steep initial climb before the hike mellows out. This hike is brought to you by Wild Montana and the Montana Native Plant Society. Pre-registration required. Sign-up at [wildmontana.org/walks](http://wildmontana.org/walks).

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## Flathead Chapter

Info: Tara Carolin at 406-607-7670; [mnp.flathead@gmail.com](mailto:mnp.flathead@gmail.com).

Email us to receive updates on field trips and events, or with questions, suggestions or if you are not getting regular emails from the chapter. Please add our chapter email to your contacts to stay informed. We hope to see you on the trail!

**Saturday, July 6 - Hall Creek Wildflower Walk (East Glacier Park).** Four to five miles, moderate. Join naturalist Lou Bruno for a wildflower-focused walk in the Badger-Two Medicine Area. We'll meander through the Hall Creek drainage, passing through a delightful variety of plant communities from aspen parks to meadows to conifer forests. We'll make a point to search for bitterroots and take in views of Glacier National Park. This outing is hosted in partnership with Wild Montana and Glacier-Two Medicine Alliance. Pre-registration required. Sign-ups begin one month before the outing at [wildmontana.org/walks](http://wildmontana.org/walks).

**Thursday, July 25 - Glacier National Park Weed Blitz (West Glacier).** Join fellow citizens in removing invasive plants from priority sites in GNP. 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. RSVP by July 11 at [glac\\_citizen\\_science@nps.gov](mailto:glac_citizen_science@nps.gov) or 406-888-7986.

**Saturday, July 27 - Badger Two-Medicine Community Weed Pull (East Glacier). 9:00 a.m. to 3:00 p.m.** Join the Glacier Two-Med Alliance and help fight weeds in East Glacier. Learn about the impacts of weeds from local experts and cultural leaders all while preserving this beautiful place. Lunch will be provided and there will be fabulous door prizes for participants. All ages welcome. Registration is required at <https://www.glaciertwomedicine.org/events/community-weed-pull/>.

## Kelsey Chapter

Info: Devon Malizia (president) or Jane Fournier (secretary) at [kelseychaptermnp@gmail.com](mailto:kelseychaptermnp@gmail.com).

**Date TBD: Plein Air Sketching and Painting Workshop.**

Contact us or stay tuned for more details.

## Maka Flora Chapter

Info: Libby Knotts at 406-774-3778; [libbyknotts@gmail.com](mailto:libbyknotts@gmail.com).

## Valley of Flowers Chapter

Info: Contact Gretchen Rupp for program details or to be added to the Valley of Flowers Chapter "Friends" e-mail list, at 406-586-8363; [beesgrmt@gmail.com](mailto:beesgrmt@gmail.com).

**Saturday, July 13, 9:00 a.m. - Native Plant Garden Tour (Bozeman).** Meet at the Museum of the Rockies parking lot, towards the east end. We will carpool to the gardens from there. We'll visit four or five residences that highlight native plants in interesting ways, with natives used in town and rural settings, both planted and seeded. Please bring a lunch. We will provide plant lists and info sheets on each garden. Tour will probably take most of the day. Leader: Linda Iverson [lilandscape@mtintouch.net](mailto:lilandscape@mtintouch.net), 406-930-1682.

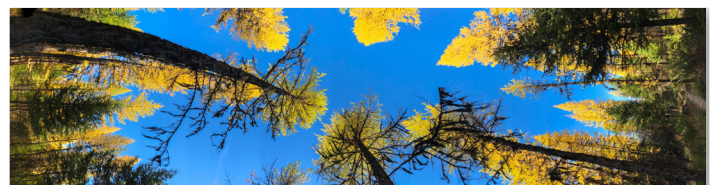
## Western At-Large

Info: Jon Reny at 406-334-0459; [jreny@kvis.net](mailto:jreny@kvis.net).

**Saturday, July 13 - North Fork Meadow Creek with Peter Lesica (Troy). 9:00 a.m. to 6:00 p.m.** Join Peter and others on this eight to nine mile round-trip, moderately difficult hike. We start out following the North Fork of Meadow Creek and work our way up to the ridge near the Idaho-Montana border (just north of Keno Mountain). The trail along the ridge goes between forest cover and open grassy slopes. The ridge has lots of beargrass which could be in bloom this time of year. Meet at 9:00 a.m. at the junction of Yaak River Road and Meadow Creek (#524) - this is approximately 17.6 miles up the Yaak River Road. There may be carpool options depending upon who signs up. Bring a lunch, water, and appropriate clothing. Contact Jon Reny for information at [jreny@kvis.net](mailto:jreny@kvis.net).

**Saturday, July 20 - Northwest Peak Scenic Area (Yaak). 8:30 a.m. to 4:30 (or later) p.m.** Join a hike to Northwest Peak in Lincoln County to visit whitebark pine and subalpine larch habitats. Chris Reichert, retired Forest Service silviculturist will lead this moderate three or four mile hike. This will be a good time to visit the beautiful Northwest Peak Scenic Area, find blooming wildflowers in the subalpine zone, and review and discuss efforts to conserve whitebark pine. Please wear sturdy hiking shoes, bring raingear, a lunch and plenty of water. Meet at the Troy Museum parking area at 8:30 a.m. to carpool. The drive to the trailhead is about 60 miles from Troy. Sign up with Chris at 406-291-8324 or [reichert.chris9@gmail.com](mailto:reichert.chris9@gmail.com).

**Saturday, October 12 - Wood Creek Larch Scenic Area (Yaak). 10:00 a.m. to 3:00 p.m.** Experience golden larch in the fall. This four mile round-trip easy hike takes us to a grove of big, old western larch close to the Canadian border. There won't be many, or any, flowering plants and you'll be mostly looking up. The trailhead is about ½ hour from Yaak on Road 92. Meet at the Dirty Shame Saloon at 9:30 a.m. There are also meet and carpool options from Libby and Troy. Contact Betty Kuropat for information and to sign up at 406-250-8156 or [blueirismt@gmail.com](mailto:blueirismt@gmail.com).





# It's Official: Montana is Huckleberry Country

By 'Asta Bowen, Flathead Chapter

It may come as no surprise that the wild huckleberry is now the official "state fruit" of Montana. For many *Vaccinium* enthusiasts that status was never in question, but it was only last year, during the 2023 legislative session, that the official title was passed into law.

*Vaccinium membranaceum*, Montana State Fruit, photo by Asta Bowen



For this historic moment we can thank, in part, the schoolchildren of Vaughn, Montana: fourth and fifth grade classes who took on the task of preparing and presenting testimony to committees of the Montana House (State Administration) and Senate (Agriculture, Livestock and Irrigation). The bill was carried by Representative Lola Sheldon-Galloway of Great Falls HD22.

At the Senate committee hearing, students presented their case to a roomful of grownups whose attire for the day telegraphed the theme with distinct pops of lavender and purple.



Photo courtesy of Montana Television Network (KT VH/KXLH): Story at <https://www.ktvh.com/news/68th-session/montana-kids-want-huckleberries-named-state-fruit>

Fifth grader Samuel Perez Potts argued that the strong taste of the huckleberry is "strong like our state." Izak Madplume noted that wild animals also make use of huckleberries, and Jaqulynn Firestone pointed out that human pickers go so far as to risk their

lives "to bring us the amazing food we make out of huckleberries." Makenzi South explained that while the huckleberry is native to Montana, it can't be grown on a farm, and in the wild there is little evidence on exactly where to find them.

Teacher Amy Brooks explained that students had also done research on the chokecherry and the Flathead cherry, but when the final poll was taken, huckleberry was the favorite. Chokecherry was deemed too widespread geographically, found as far away as Georgia, and Flathead cherry was not native. Brooks also noted the symmetry of the state fruit being a favorite food of the state animal, the grizzly bear.

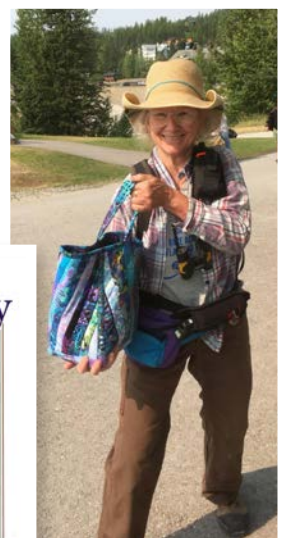
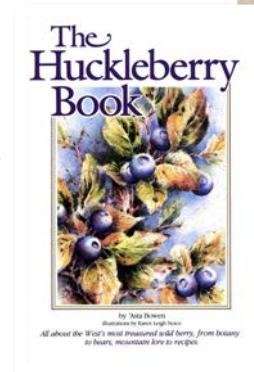
One senator took issue with the huckleberry as "a little sassy" (making too much of itself like a star athlete, while the hardworking chokecherry "gets the job done") but still voted for passage. Another thought the legislature had gone too far with such acts when it designated a "state soil," and went on to vote no in the final reading.

Still, after passing unanimously through both legislative committees, the bill won decisive approval from the full House (90 yea - 9 nay) and Senate (38 yea - 11 nay), making *Vaccinium membranaceum* the official "state fruit" of Montana.

Representative Courtenay Sprunger, who sat on the House committee, felt the Vaughn students really "did their homework" in presenting the matter. Sprunger added, "Hats off to Representative Sheldon-Galloway (who herself sported an outstanding purple ensemble for the big day) for going the extra mile to give these young people the opportunity to take part in the legislative process. For most, I imagine it's a day they'll fondly remember; perhaps a few will be inspired to serve someday down the road, in one way or another. It was certainly one of the sweetest days we shared last year in State Administration."

In the end, HB 880 might have been one of the better bargains of the 2023 session: the fiscal appropriation for the measure was just \$500, for the graphic design of a huckleberry image to include with the other symbols on our tourist map. According to state staff, the revised map has yet to be released.

Asta Bowen, a Somers, Montana author, penned a popular newspaper column titled "Peace Correspondent" for the *Seattle Post-Intelligencer* for over ten years. Her debut book, "The Huckleberry Book" (Farcountry Press, 1988), is a comprehensive guide to all things huckleberry, earning its place as a long-standing bestseller on the subject.



On our first walk to our field site, Justine fell behind. My trusty technician, Heidi Fleury, fell back to check in with her and learned that Justine had little experience hiking and was terrified of bears. We made it to our plot, but Justine wouldn't sit down because she was also terrified of bugs. I was sure she would quit, and this was the last I would see of her.

But she stayed. Day after day, Justine came back even when most of the other students stopped coming. She worked closely with my trusty tech, Heidi, an experienced field lady who patiently showed her how to identify grassland plant species. I remember hearing her laugh with Heidi for the first time, when she finally started to relax in the field. At Heidi's side, Justine transformed from a shy indoor person into a competent botanist that was cracking jokes and taking pictures of the cute little field bugs that previously made her skin crawl. Heidi showed her that fieldwork can be a safe space where people like her can belong.

With help from Justine, the Montana Native Plant Society small research grant, the Blackfeet Community College and Glacier National Park, we established a baseline floristic survey of Blackfeet grasslands in preparation for the bison reintroduction that just occurred this past summer. We found that although non-native species dominated most meadows due to a legacy of livestock grazing, there were several strongholds of native species diversity that tribal managers are planning to protect and monitor into the future. In addition, we discovered that *Leymus innovatus*, a wildrye species that is rare inside the park, was quite common in the meadows we surveyed, despite being only a few miles from the park boundary. This survey is the beginning of a long-term assessment of the impacts of bison grazing on these communities. At the end of the season, Justine admitted that our field season ended up being one of the best summer positions she has ever had, thanks to the supportive environment we fostered. She is now finishing her coursework at the Blackfeet Community College and is planning to attend Montana State University to complete her degree in criminal justice. Before that though, she is considering coming back to work with us next summer. I hope this story inspires other botanists to make our field teams more like our favorite meadows: colorful, diverse, and a place for everyone to feel like they belong.



The team. From left to right: Justine Trombley (BCC intern), Nico Matallana (PhD Researcher), Ezekial Still Smoking (BCC intern), and Heidi Fleury (the trusty tech).

Grasslands are the most threatened biome in the world, yet they store disproportionate amounts of carbon and provide essential ecosystem services such as rangeland forage, wildlife habitat, and aesthetic value. The fescue grasslands of northern Montana are a uniquely diverse and well-preserved ecosystem and are about to be ground zero for the largest bison restoration effort in modern conservation. Building off existing data in Glacier National Park, this project trained Blackfeet Tribal Nation college students in plant community survey techniques to establish the critical baseline knowledge of community composition, ecosystem function and nutrient cycling in the context of bison restoration. Results will inform a landscape-scale model of bison habitat and carrying capacity that will help managers in Glacier National Park and Blackfeet Tribal Nation cohesively manage these fescue grasslands for biodiversity and ecosystem function. Tribal college students worked with graduate students, tribal managers, and indigenous knowledge holders to learn multiple ways of knowing.

## WELCOME NEW AND RETURNING MEMBERS!

The Montana Native Plant Society would like to welcome and thank new and returning members from the following chapters:

### Artemisia Chapter

Hank Fuller, Belinda Holloway, Dave Malutich: Piney Island Conservation Services, Merita Murdock, Bryn Robertson, Anthony Sammartano

### Calypso Chapter

Wayne Froboese, Kelly Savage, Darci Stewart

### Clark Fork Chapter

Ellen Chuang & Thomas Templeton, Sarah Fangsrud, Nicole & RJ Higgins, Meagen Larson, Rosie Lemire & Ron Williams, Julia Lippert, Jane McGuire, Martha Powers Swanson, Shanley Swanson, Elena Ulev, Donna Williams

### Flathead Chapter

Teri Balaska, Daniel Boughter & Kate McHugh, Pom & Kathi Collins, Stephani Conner & Jude Ferrara, Babby McCartney, Trishia Pollard, Mia Randolph

### Kelsey Chapter

Carolyn Adams, Carissa Beckwith, Patti Borneman, Bethany James, Michael A. Jasumback, Anne Stites Hausrath

### Maka Flora Chapter

Ann Jensen

### Valley of Flowers Chapter

Kerry Corcoran-Ellig, Ginny Cowan, Kendra Dennis: Western Meadowlark LLC, Heather Nack-Culbreth, Emma Narotzky, Terri Narotzky, Bryce Pease, Lisa Rew, Terry Rick, Alzada Roche, Allison Rognlie, Suzanne Winchester



# INVASIVE EXOTIC PERENNIAL GRASSES IN MONTANA:

## Ecology and Weediness/Desirability

By T. Weaver, Professor Emeritus,  
Montana State University, Bozeman, MT

**ECOLOGY.** Invasive grasses in Montana include rhizomatous perennial grasses, perennial bunchgrasses and annuals. Rhizomatous perennial grasses include smooth brome (*Bromus inermis*) and kentucky blue grass (*Poa pratensis*) of foothill mesic sites, timothy (*Phleum pratense*) of slightly moister sites and reed canary grass (*Phalaris arundinacea*) of still wetter river-side sites. Perennial bunchgrasses include crested wheatgrass (*Agropyron cristatum*). Annuals include cheatgrass (*Bromus tectorum*) and Japanese brome (*Bromus japonicus*).

These grasses establish randomly at various densities, wherever competitive, gradually increase both by seeding and, if rhizomatous, by vegetative spread as well. In both perennial and annual cases, plants rarely establish in vigorous native vegetation. They invade, instead, micro- or macro- "safe (non-competitive) sites" disturbed, for example, by animal burrows, overgrazing, road cuts or cultivation. Rhizomes (vegetative reproduction) allow established grasses to expand clonally in vegetation where micro-sites are rare, often yielding circular patches/clones in the matrix of undisturbed natural vegetation.

Colonization by a grass is often overlooked both because the new vegetation is "just grass" - as was the original grass matrix - and grasses have no conventionally distinctive flowers. Thus, on foot, surveyors must constantly check for, for example, the inconspicuous nodding heads and "W"-marked leaves of smooth brome, the rail-road tracks and keels of kentucky bluegrass leaves, the dense cigar shaped inflorescences of timothy, or the tall nodding inflorescences of reed canary grass.

The invasion of native vegetation is most easily seen as patches of vegetation with distinct but subtly different texture than that of the native matrix. Examples include: 1) Along roadsides, disturbances once seeded with smooth brome (no longer done by Montana Department of Transportation, for fear of invasion), one often sees nearby across-the-fence vegetation coarser and more homogeneous (i.e. with fewer "wild flowers") than in the native pasture at greater distance. Such invasion is most obvious in the fall, when the invader can be more reddish/grayish than the yellowish native prairie. While such invasion seems localized at a roadside it advances slowly and inexorably. 2) Such invasion needn't occur near a seeded site. When one accesses "remote" vegetation one often sees distinct circular clones of homogeneous vegetation embedded in native prairie, clones derived by lateral rhizomatous growth spreading from a long-distance single-seed colonization. Examples are seen in grassy parks, for example, in

bluebunch wheatgrass (*Agropyron spicatum*) grasslands of the dry Madison River Buffalo Jump; or in the moister once-native fescue grassland of Bozeman's Burke park (Seipel/Lavin 2006), now mostly consisting of smooth brome. In the latter case one might attribute the change to disturbance/seeding of human/canid traffic, but a similar increase in smooth brome/kentucky bluegrass is also seen in untrammelled Idaho fescue (*Festuca idahoensis*) and bluebunch wheatgrass grasslands on the same ridge only blocks to the south. Similarly, smooth brome/kentucky bluegrass invasion is seen in the USFS Bangtail Special Interest Area (SIA) described below.

Invading species tend to occupy specific segments of the water/precipitation gradient (Weaver 1980) according to their tolerances (Weaver et al. 1981, 1989). Crested wheatgrass can dominate short-grass prairie sites of the plains where precipitation averages ~14" (range 11-15"), smooth brome becomes aggressive on bluebunch wheatgrass sites, where precipitation averages ~15" (Belgrade). Kentucky bluegrass enters where precipitation averages ~15-21" (> 17", Bozeman, and mixed grass prairies of the Dakotas). Timothy is found low in the forest zone, where precipitation averages ~23" (low lodgepole pine forests Yellowstone National Park) and canary grass appears where free water is near the ground surface. Note, however, that the invaders often occupy sites outside the specified climatic zones, for example where local factors (e.g. soils, topography, or drainage) make the subsite drier or moister than its norm.

**DESIRABILITY vs WEEDINESS.** For the sake of discussion, I ask whether these invaders are weeds/not-weeds. A weed is usually defined as a plant growing where it is not wanted. Thus, kentucky bluegrass is not a weed in lawns, nor are smooth brome or timothy weeds in domestic pastures. But each colonizes native grasslands and eventually dominates richer segments in its tolerance range by seeding followed by spread to drier sites by rhizomatous growth. Thus, they become weed candidates - according to how one values diminishment of native vegetation of the site. A noxious weed is defined as an aggressive exotic, one that significantly diminishes the native vegetation of sites it occupies. The lack of formal designation does not imply that the plant is not damaging (cf. Lavin 2020). It may imply that it is not noticed. Or that regional weed boards choose not to designate it so - either because it is not noticed or because, if it were so designated, it would be hard/impossible to control, as the law requires. Thus, when I once asked the chairman of the weed board (Sheeley pers. comm.) about smooth brome/kentucky bluegrass he responded that "as aggressive exotics they

should be so designated, but "please don't ask us to call them noxious weeds." In such cases managing agencies may prefer that the invader be designated "naturalized" to eliminate the legal necessity of controlling it.

As a case in point, I describe invasion in a mountain meadow (ungrazed Idaho fescue, 7800 feet, precipitation ~ 700-1000 mm/yr, windy, rich silt-loam soils [e.g. Weaver and Bao 2020]). The meadow matrix contains easily recognized clonal discs of atypical vegetation where single individuals of kentucky bluegrass or smooth brome have established by seed and expanded laterally by rhizomatous growth to diameters of 2-4 m for kentucky bluegrass and 5-10 m for smooth brome. Paired samples were taken in the native fescue vegetation and in the invading clonal vegetation to compare the productivities and species diversity of the three vegetation types. 1) Production (gm/m<sup>2</sup>/yr) increased very significantly from native Idaho fescue (1) to clonal kentucky bluegrass (1.2 times: 1.65) to smooth brome (3 times: 2.7). [The exotics are then somehow better able either to use the available water/nutrient resources to produce forage or are able to resist unidentified consumption.] Thus, a grazer may choose to domesticate the vegetation by encouraging kentucky bluegrass/smooth brome to increase forage production. 2) Simultaneously the native grasses disappeared and species richness fell very significantly from native Idaho fescue (16-12 species/0.5 m<sup>2</sup>) to kentucky bluegrass (11 species/0.5m<sup>2</sup>) to smooth brome (4 species/0.5 m<sup>2</sup>). Apparently the highly productive kentucky bluegrass/smooth brome exotics either consumed the water/nutrient resources so effectively as to leave none for the native community or allelopathically/chemically poisoned the natives out. Most conservationists would choose to exclude/remove kentucky bluegrass/smooth brome to preserve the vegetation type and the diverse species that comprise it. 3) Unfortunately, neither exotic can be practically removed from the native vegetation by cultivation or chemical application; the only hope for removal is application of invader-specific biocontrol agents for kentucky bluegrass and smooth brome - agents unlikely to be developed and - because they would destroy off-site lawns and domestic pasture - socially impossible to apply.

**ACTION.** Whether the reader prefers increases in production or preservation of diverse vegetation types and species diversity within these vegetation types, he must recognize the impossibility of the latter (Daubenmire ~1974 pers. comm., Toledo et al. 2014, Weaver and Bao 2021). Thus, he must resign himself to the change, determine the consequences of the change (for example, erosion and forage quality) and manage for the new conditions.

## LITERATURE CITED

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Illustration of the exotic perennial grasses in order of their location on the water gradient: crested wheatgrass (*Agropyron cristatum*) - Cindy Roché, Illustrator; smooth brome (*Bromus inermis*), kentucky bluegrass (*Poa pratensis*), timothy (*Phleum pratense*) and reed canarygrass (*Phalaris arundinacea*) - from Hitchcock & Cronquist *Flora of the Pacific Northwest*, 1950.



# Gardener's Notebook

## Using Native Plants in Backyard Landscaping

### Do-It-Yourself, Homegrown National Park

By 'Asta Bowen  
Flathead Chapter

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National parks have been getting a lot of love since the pandemic, so much that you need reservations just to drive Montana's legendary Going-To-The-Sun-Road in Glacier National Park, and passes can sell out within hours of release.

That's better than parking lots full by sunrise and packed trails, but it makes me all the more interested in this new national park being developed. It's even closer to home than I would have thought possible.

It's also closer to you. "Homegrown National Park" is the brainchild of Doug Tallamy, entomologist at University of Delaware and author of *Nature's Best Hope*. His pitch: we're in trouble biologically, and it has to do with basics we often take for granted: basics like soil and water, and pollinators for the so-called "food chain," without which we two-leggers could quickly become "extinct." Half a century after banning DDT, we're still losing 60 million birds a year, and it's not just their pretty singing at stake.

You could thank a yellow warbler, for example, for the coffee you're drinking, which might have been ruined back in Costa Rica if not for the birds providing pest control on the plantation. As for those timbers holding up the roof over your head? It's birds like the chickadee that helped protect that Doug fir from spruce budworm back in the forest.

When it comes to the food chain, those of us at the top will do well to understand what's at the bottom, and here's the rub: saving trees is not enough. We also need the birds and bugs, and they can't all live in national parks.

Despite our wealth of public lands, most of the country is under private ownership. Tallamy's idea is to capitalize on that with a large number of small projects - as small as a single city lot in the old railroad town of Livingston, Montana, or a corner of your own front yard.

So about my yard, and maybe yours. They don't have to be ecologically pristine to be biologically valuable, and you don't have to dig up the whole lawn to make a difference. Even a few square feet of native plants can bring a missing species back home. A simple motion sensor on the yard light can save moths, along with other creatures who depend on them.

But if we build it, who will come? In Livingston, after Beth Madden planted her "postage stamp" lawn with native shrubs and wildflowers, the number of visiting birds grew from seven

species - mostly starlings, pigeons and such - to more than 50. She saw flocks of warblers feasting for hours on tiny bugs to fuel their migration, and a giant sphinx moth pollinating the new bee balm.

Over in Bozeman, a resident who started with a typical lawn found herself in the middle of a "pollinator desert" despite being right across the street from a park, which consisted of mowed grass and just a few trees. Using thick layers of mulch and water-wise native plants, she turned a hot, south-facing part of her yard into a refuge drawing bees, moths, and before long, butterflies. Conservationist Paulette Epple said, "The last plant blooming in the fall is smooth aster and it is always crawling with bees."

Another bird enthusiast tried for years to attract hummingbirds to her feeders, with no luck. But after swapping out her petunias and marigolds for more bird-friendly plantings, she was rewarded with her first calliope hummingbird.

Even in downtown New York City, along the reclaimed Highline Trail, Doug Tallamy found native plants growing on "grit," plus four species of native bees, and two Monarch butterflies nectaring away - all 30 feet above city traffic.

My own yard is a study in benign neglect, but last spring my neighbor and I decided to put in a "friendship hedge" along our property line. Together we planted two types of native currant bushes, and pollinators were on them before we'd even put the tools away. Come fall, the bushes with the most berries turned out to be - surprise, surprise - the same variety as a wild currant that was already growing just up the hill.

You won't find it in a travel brochure, but Homegrown National Park is open year-round. No crowds, no lines, and no reservations required.



Monarch on blazing star

# President's Platform

Looking back over the last year that I have been co-president, I wanted to give a big thanks to everyone who has been a part of keeping MNPS vibrant and moving forward – the board, many other volunteers, and Leah Grunzke, our administrative assistant. MNPS has lots of events – our annual meetings, plant conservation conference, MNPS Presents! online programs, field trips, and many other chapter activities. We have this this newsletter, our website, and other publications. There are numerous committees who plan, coordinate and implement specific work to support our mission. And of course none of this happens without all the behind the scenes work of managing membership, finances, governance and our local chapters. All of this is directly tied to our mission: preserving, conserving, and studying the native plants and plant communities of Montana, and educating the public about the value of our native flora.

It's inspiring that all this happens because of the passion and dedication of so many people for Montana's native plants, for serving our mission and members, and keeping our community connected. So, join me in giving a big thanks to all who make MNPS what it is!



*MNPS President, Dave Hanna*



A grand time was had by all on a field trip to Lost Trail National Wildlife Refuge west of Kalispell in May. You can read about LTNWR and its designation as an Important Plant Area in the [Winter 2023 Kelsey](#) "Montana Has a New Important Plant Area." Photo by Lynn Smith.



# The Consortium of Pacific Northwest Herbaria Database: Improving Data Quality

By Matt Lavin, Valley of Flowers Chapter

Hopefully many of you have found the Consortium of Pacific Northwest Herbaria (CPNWH) database to be useful as a resource for viewing online images of herbarium specimens, understanding geographical distributions of plant species, and downloading plant information for further analysis, for example. As of April 2024, the CPNWH database included 3,067,849 specimen records and 1,464,762 images from 52 participating herbaria. That is a lot of information, which requires a community of botanists to oversee data quality.

The herbarium at Montana State University Bozeman, MONT Herbarium, is hoping that Montana botanists from across the state, and elsewhere, will help improve the quality of the data associated with MONT herbarium specimens represented on the CPNWH database. Occasionally, when typing in the genus and species names in the appropriate text boxes on the webpage [www.pnwherbaria.org/data/search.php](http://www.pnwherbaria.org/data/search.php), it could be that, for example, a MONT specimen is reported from Custer County, Montana, when the actual image of the specimen (Figure 1) clearly indicates that it comes from Custer County, Idaho.

If you find any such errors associated with MONT herbarium images associated with the CPNWH database, whether they represent mistakes in geographical information or taxonomic identification, or anything else, please contact Matt Lavin, curator of the MONT Herbarium at Montana State University Bozeman ([mlavin@montana.edu](mailto:mlavin@montana.edu)) so that such errors can be readily addressed and the overall quality of the CPNWH database continuously improved. Thanks!



Figure 1 (above right). A search of the CPNWH database for *Arnica rydbergii* Greene (family Asteraceae) in Montana includes 110 herbarium specimens. Until recently, this search would include the above MONT specimen from Idaho even when the search specified only Montana localities of this species. The CPNWH data associated with this image mistakenly assigned Montana rather than Idaho as the state in which this specimen was collected. This mistake and many others were corrected after they were brought to our attention by Peter Lesica.

## Field Trip Report: Shannon Lake Area

By Jon Reny,  
Western-at-Large Chapter

Shannon Lake is about a mile west of the Kootenai Falls, south of the river, and a good 600 feet higher in elevation than the river. The Grambauer Mountain trail and the Old Highway 2 trail both go very close to the lake. On May 2<sup>nd</sup>, seven of us walked a mile up the Grambauer Trail to where it overlooks the lake. This is an area of shallow soils, exposed rock, and ticks. There were many flowers to observe and the colors were vibrant. The views west to Troy and south, down towards Bull Lake, were lovely. We also got to observe, first-hand, an active population of ticks.

Included in the 31 species we found flowering were three species of biscuitroot (*Lomatium*), glacier lilies, yellow bells,

clematis, woodland-star, prairie smoke and shooting stars. The uncommon Geyer's biscuitroot (*Lomatium geyeri*) was found to be in "good supply" in these openings. It dies back early in the season and is often missed. We also found the population of desert yellow fleabane (*Erigeron linearis*), but we were too early and the plants were not yet flowering (last year, by May 22, this same population had gone to seed.)

After realizing we would not defeat the local hyper-active tick population, we decided to head back down the trail. One of the botanical highlights was finding showy Jacob's ladder in the rock-scrub area near the lake.

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The Montana Native Plant Society (MNPS) is a 501(c)(3) not-for-profit corporation chartered for the purpose of preserving, conserving, and studying the native plants and plant communities of Montana, and educating the public about the value of our native flora. Contributions to MNPS are tax deductible, and may be designated for a specific project or chapter, for the Grants & Giving Fund, or the general operating fund.

Your yearly membership fee includes an electronic subscription to *Kelsey*, the quarterly newsletter of MNPS. We welcome your articles, field trip reports, book reviews, 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 [scottguse@yahoo.com](mailto:scottguse@yahoo.com) and [jenhintzguse@gmail.com](mailto:jenhintzguse@gmail.com), or mailed to: Scott and Jennifer Guse, *Kelsey* Editors, 725 Twin Lakes Road, Whitefish, MT 59937.

## Fall issue submission deadline is September 10

Please send web items to our webmasters:

**Bob Person and Carol Goffe at [mnpwebmaster@gmail.com](mailto:mnpwebmaster@gmail.com)**

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