Volume 34 No. 3 | **Spring 2021**

Kelseya

Newsletter of the Montana Native Plant Society

Kelseya uniflora
ill. by Bonnie Heidel

SMALL GRANT REPORT

Reestablishing Native Plant Communities Post-herbicide in the Centennial Valley

By Claire Ols, Invasive Species Coordinator, Centennial Valley Association

Located in southwest Montana, the Centennial Valley is one of the last remaining intact and relatively undeveloped landscapes in the state. It contains a variety of native habitat, including grasslands and sagebrush steppe, that supports iconic wildlife species such as grizzly bears, elk, Greater Sage-Grouse, and wolves. Founded in the early 2000s, the Centennial Valley Association (CVA) is a landowner-led organization that works to preserve traditional ranching as a way of life in the Centennial, while maintaining quality open space, wildlife habitat and migration corridors, as well as water quality for future generations.

Invasive plant management in the Centennial has been ongoing for several decades with partners such as Beaverhead County Weed District and The Nature Conservancy leading the program. In 2015, the CVA was handed the baton and is leading the Centennial Valley Invasive Species Program for the community and partners, treating noxious weed infestations in the valley and supporting the native plant community for future generations.

In 2019, CVA initiated a revegetation project to complement traditional treatment efforts and further strengthen this intact native plant community. This year, with the support of a Montana Native Plant Society grant, we were able to reseed 10 acres within an area identified as high priority wildlife habitat with a mixture of native fescue and forb species that included Idaho and Rocky Mountain fescue, arrowleaf balsamroot, Rocky Mountain beeplant, and western yarrow. These species were selected based on their relative forage value to both wildlife and livestock, site conditions, seedling vigor, and weed interference. Located on Monida Hill, in the southwestern side of the Centennial, the project site has undergone successful herbicide spot-treatments to manage infestations of spotted knapweed and Canada/musk thistle, with a documented decrease in the abundance of these species since 2015. However, these species will reestablish without competition from a healthy native plant community.

Despite COVID-19-related shipping delays and an unexpectedly warm fall, CVA completed broadcast seeding efforts within the project site in late October for a successful cold season, fall dormant reseed. Prior to reseeding, we also established a 100 m monitoring transect with three photo

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monitoring sites to qualitatively and quantitatively assess plant species diversity and percent ground cover. Monitoring will be conducted twice per year to evaluate the establishment of the reseeded species while watching for potential weed invasions. We estimate that approximately 70% of ground cover at the project site will be native grasses and forbs five years post this reseeding treatment and look forward to seeing the results!

This project would not have been possible without our partners at Montana Fish Wildlife and Park's Wildlife Habitat Improvement Program, the Bureau of Land Management, Red Rock Lakes National Wildlife Refuge, and The Nature Conservancy who provided support, equipment, and materials for this project. We would also like to extend a huge thank you to the Montana Native Plant Society who helped make this project possible!

If you have any questions about this project or other invasive plant management efforts in the Centennial Valley, please do not hesitate to contact Clare Ols, Invasive Species Coordinator, at invasiveweeds@centennialvalleyassociation.org.

Cover photos

Top: The Monida Hill project site. Taken during broadcast seeding in October 2020.

Right: Photo quadrat along the vegetation monitoring transect. Taken prior to reseeding in October 2020.

COVID-19 Field Trip Guidelines

In spring and summer 2021, the COVID-19 situation will be changing rapidly. All field trips will adhere to current CDC guidance at a minimum. By the end of summer, no special precautions may be needed, but before then, we ask that:

- Everyone who wishes to go on a field trip register with the leader. You can do this by e-mail or phone. There will be a limit of eight or fewer participants plus the leader on each field trip. If you must, cancel promptly so others can take your spot.

- Don't carpool to the trailhead unless everyone in the car is fully vaccinated.

- Keep socially distanced and masked while in the field.

- Don't share hand lenses, plant identification materials or binoculars.

- Everyone will need to sign in at the trailhead, both for waiver of liability and in case COVID-19 contact tracing is needed.

Thank you!

Chapter Events

Calypso Chapter

Info: Catherine Cain at 498-6198, nativeplants@montana.com or Karen Porter at 498-9728, karenwporter44@gmail.com.

Calypso Chapter will begin the season with participation in Whitehall, MT's annual Arbor Day activities on April 30, 2021. After that, no dates have been set, but plans include field study of *Artemisia* species, the peak bloom in the Highland Mountains foothills and adoption of a trailhead maintenance commitment in association with the Adopt A Trailhead Montana program. A firm schedule will be in the MNPS Summer Field Trip Guide to members in early May.

Clark Fork Chapter

Info: Anne Garde at 721-7627, anniegarde@yahoo.com or Paul Buck at (970) 901-2418, paul7703@gmail.com.

The Clark Fork Chapter will have chapter board elections and budget approval by email in April.

Stay tuned for field trip announcements by email.

Eastern At-Large

Contact Jennifer Lyman for all field trips or information at 860-0223, jenclyman@gmail.com.

The weather is unpredictable at all sites. Please bring a variety of weather clothing, including rain and wind gear, plenty of water, lunch, snacks, hiking boots, *The Manual of Vascular Plants of Montana*, a hand lens and camera. Trips will last all day, but folks can leave the group as necessary.

June 19, 9:00 am, Bridger: Pryor Mountains (south side). We will explore the area of the Pryors that includes the rare plant *Physaria pachyphylla* and its plant associates. This region is included in the Research Natural Area and Area of Critical Concern proposed to the BLM. This trip will be an easy walking trip, but over a variety of uneven terrain and some cactus.

June 26:, 9:00 am, Red Lodge: Alpine Meadows of the Beartooth Mountains. We will explore the alpine meadows of the Beartooth Mountains along Quad Creek and the meadows across from Gardiner Lake. This trip will be an easy walking experience through alpine meadows, tundra, and fellfields. We will focus on early flowering alpine perennials and shrubs.

July 10, 9:00 am, Red Lodge: Subalpine and Alpine Meadows of the Beartooth Mountains. We will explore a couple of the same areas of the Beartooths to explore the alpine meadows for later flowering plant species and also continue over to the Long Lake area to look for plant species in the wetland and shoreline areas of the subalpine area. The trip will involve three to four miles of moderate hiking, at altitude, over the course of the day.

Flathead Chapter

Info: Tara Carolin at 607-7670, mnps.flathead@gmail.com.

Thursday April 15, 7 pm on Zoom: How to Use the Montana Field Guide and Other Montana Natural Heritage Program Websites. Bryce Maxell, Program Coordinator for the Montana Natural Heritage Program, will be showing us these underutilized online resources that are readily available to everyone. Invitations will be emailed to all MNPS members.

Saturday, April 17: Owen Sowerwine Natural Area. Flathead Audubon and MNPS invite you to join Denny Olson, Flathead Audubon Conservation Educator, and Pat Jaquith for a walk in the Owen Sowerwine Natural Area to share the joy of spring in this birding hotspot that boasts sightings of 157 species! The area has been challenged by the proliferation of the non-native *Rhamnus cathartica* (common buckthorn). We will discuss restoration efforts to encourage the growth of black cottonwood, aspen, redosier dogwood, and other native species in this riparian habitat. Please prepare for the weather and wetland like conditions! *Contact: Pat Jaquith at pjaquith07@gmail.com, (802) 735-7866.*

Thursday, May 27, 6:00 pm: Columbia Mountain Wildflowers. The Columbia Mountain Trail is a flower lover's paradise. Join Ellen Horowitz of Montana Native Plant Society for an evening wildflower walk. We will travel through many habitat types – from moist forests to dry open slopes. Expect an easy pace with lots of stops to view big, bold blossoms like those of balsamroot, and less conspicuous beauties that include orchids and miterworts. The hike will be moderately difficulty (about two miles and 500 feet elevation gain). This walk will be limited to six participants and masks are required. Participants MUST call to register. *Contact: Ellen Horowitz horowitz@centurytel.net, (406) 270-1689.*

Monday, June 14, 6:00 pm: Whitefish Trail Wildflower Walk. Meander through the forest and learn about the wide array of colorful wildflowers that line the Whitefish Trail with Whitefish Legacy Partners and Jen Asebrook of the Montana Native Plant Society. You'll learn how to identify local wildflowers and noxious weeds, using the hand lenses and field guides provided during this two to three mile hike. Participants MUST register as space is limited at www.whitefishlegacy.org. *Contact: Christiane Hinderman at education@whitefishlegacy.org or (406)-862-3880.*

Sunday June 27, 8 AM-12 PM. Swan River Wildlife Refuge. This is a joint field trip between Flathead Audubon Society and the Flathead Chapter of the Montana Native Plant Society. Join Maria Mantas and Cory Davis as we explore the emergent marshes, wet meadows, and riparian forests of the SRNWR. We'll learn about conservation projects in the Swan Valley and see some great birds (maybe bitterns, snipe, and/or redstarts). On our last excursion we sited 61 bird species! Knee-high boots are highly recommended! For safety reasons, this trip is limited to four FAS and four MNPS participants. *To sign-up contact Cory Davis at cory@flatheadaudubon.org, (406) 257-3166.*

Kelsey Chapter

Info: Mark Majerus (president) or Jane Fournier (secretary) at kelseychaptermnps@gmail.com.

Maka Flora Chapter

Info: Bob Srygley at 488-6086, robert.srygley@usda.gov.

Valley of Flowers Chapter

Info: Beth Madden at 224-1012, bethmadden64@gmail.com.

Tuesday, April 13, 7 p.m. Thirty Years of Open Data Collection - An Overview of Flora Data Collection of the National Ecological Observatory Network (NEON) in Yellowstone with Jake White and Jarrett Jamison. This program is online. A Zoom link will be emailed to MNPS members at the beginning of April. Recordings of some of our previous online programs are available at https://www.mtnativeplants.org/chapters/valley-of-flowers/.

Saturday May 8. The Hogback, Paradise Valley. Climb the ridge trail atop this prominent geological feature, on private land, in the foothills on the west side of the Paradise Valley. The south face of this steep, knife-edged ridge hosts rocky, xeric plant communities, while the north side supports coniferous forest and associated understory plants. This hike is moderately strenuous with two to four miles walking and an elevation gain of 1,500 feet (to about 6,600 feet). Hiking poles may be helpful for steep sections; rattlesnakes may be present. This hike affords fabulous views of the Paradise Valley and Absaroka Mountains. Limited to 10 people. *Contact: Gretchen Rupp at beesgrmt@gmail.com, (406) 586-8363 (don't hesitate to leave a message).*

Western At-Large

Info: Kris Boyd at 295-9414, boyd.kristina@yahoo.com.

2021 Annual Meeting Canceled!

The Annual Meeting for 2021 is postponed. The MNPS board of directors has decided not to encourage travel and large group gatherings with COVID-19 still a factor. The Flathead Chapter and Western Montana At-large members are, however, excited to pick up where we left off and host the Annual Meeting in 2022 in Northwest Montana with a rustic campout and a variety of field trips.

We will hold a digital Annual Membership Meeting in early autumn. Newly elected officers will be introduced (please vote!), awards presented, bylaws proposed, reviewed and voted upon. We will hear committee and chapter updates, and maybe have an entertaining and educational presentation or two.

MNPS chapters are planning several virtual events and real, live, local field trips under the Montana sky. Dates and details are found in the Chapter Events listing in this *Kelseya*, the field trip brochure coming in May and the MNPS website.

The People Behind the Plants

UM's "Plant Lady" Retires

By Beth Judy, Author, Bold Women in Montana History

In December 2020, MNPS member Kelly Chadwick retired after 37 years as garden manager at the University of Montana Student Center (UC) in Missoula. Plants inside the building numbered about 350, of about 150 tropical and temperate species. Kelly planted almost all of them. "I will miss my plants," she told a reporter.

Fortunately, for just as long, Montana native plants have been a major focus for Kelly – and that's not changing. Having served the MNPS Clark Fork chapter in many capacities, she'll continue to help coordinate and develop the Lackschewitz-Preece Native Botanic Garden near the UC, highlighting plant communities across Montana.

"I always appreciated nature, but I didn't understand the richness (of ecological relationships). Native plants helped me look deeply," Kelly says, crediting Peter Lesica with introducing her to the society. "At first I asked, 'Why does that plant's name matter?' " Soon, she grasped why. "For one thing, there's so few people who do know the plants. If you don't know them, they're not protected."

MNPS members are as awesome to Kelly as native plants. "They're knowledgeable, passionate, generous – just admirable people I'm lucky to know."

Kelly doing phenology with Janet Simms and a student in the Montana Native Botanic Gardens. Photo by Ken Stolz.

> ***"MNPS members are as awesome to Kelly as native plants. 'They're knowledgeable, passionate, generous – just admirable people I'm lucky to know.' "***

Three decades of work with the State of Montana Arboretum will also continue. Representing the MNPS on the Arboretum Committee, Kelly helped ensure an emphasis on native trees and shrubs.

Now, with more time, Kelly hopes to reestablish a native grassland in her yard, and will add to the many natives there, like the thriving *Penstemon fruticosus* by her front door. She looks forward to attending MNPS field trips and annual meetings and more plant-related travel in general. She's always wanted to plant-hunt: to choose a species she's never seen in the herbarium, then search for it wherever it was found.

What native plant would Kelly be, if she could? Because of the arboretum, she thinks first of trees. "An alpine larch? It lives in such a beautiful environment." For non-trees, she considers fuzzy *Penstemon eriantherus* but defaults to the gentians. Which species? "*Gentiana calycosa*. That color blue is so showy. Plus, if I were a plant in the habitat where it lives, versus a human, the mosquitoes wouldn't bother me."

Always dedicated (and practical), Kelly Chadwick will continue her longtime relationship with native plants and their human admirers – a symbiosis with rich rewards all-around.

Welcoming Our New Vice President

In January, the Board voted to appoint Robert Pal to the position of Vice President, recently vacated by Ryan Quire. His term runs through summer of 2022. The Calypso Chapter has benefitted from Robert's engaging programs and field trips. We are pleased that Robert will now be contributing his talents to the MNPS statewide.

-MNPS 2021 Nominating Committee

Robert Pal is an Associate Professor and the Director of Restoration at Montana Tech (Department of Biological Sciences). He holds a Master's Degree in Agriculture and a Ph.D. in Biology/Botany. His main research focus has always been the study of the flora and vegetation of disturbed habitats, including agricultural and urban areas. That led him to work on ecological restoration and plant invasions. He was awarded by prestigious research grants such as the Fulbright Research Grant and the Marie Curie Fellowship. Robert oversees the Ecological Restoration MS Program, the Restoration Certificate, and the Native Plant Restoration Program at Montana Tech. Besides multiple restoration projects, he is part of several national and international research projects mainly in biological invasions.

Photo by Alycia Holland

Celebrating Caroline Kurtz

We take the opportunity to celebrate Caroline Kurtz. This issue of *Kelseya* is the first in more than a decade that Caroline Kurtz won't be shepherding to the printer and out to the MNPS readership. Speaking as the incoming editors, we feel *Kelseya* has blossomed under her watch and wanted to give her a "little farewell writeup," in her words, as she embarks on her next life chapter.

After moving to Missoula in 1997, Caroline's first job was to write for various publications of the Office of University Relations at the University of Montana. In 1998 she was recruited to coordinate the "Field Notes" radio program produced by the Montana Natural History Center and Montana Public Radio. In the early 2000s she helped create MNHC's "Montana Naturalist" magazine and was its editor until 2012. During that time, Peter Lesica, Conservation Committee Volunteer (Clark Fork Chapter), "talked her into" taking on the *Kelseya* editor role as well.

MNPS Annual Meeting, Lincoln, MT. Peter Lesica giving Outstanding Service Award to Caroline Kurtz. Photo by Dee Blank.

MNPS is an active and thriving organization, and Caroline has played a key role during her tenure. At the helm of *Kelseya*, she built on the work of past editors to develop the tone and voice of the newsletter, highlighting the personal response to nature.

In the words of some queried to share their experiences working with Caroline, she was beloved by contributors and readers for her ability to fine-tune words without changing meaning, her eye for detail, and for an ability to help others to tell a story in a concise and clear manner.

With a little extra free time now, she looks forward to riding horses and competing in the sport of Three-Day Eventing. Caroline loves to travel; she loves to spend time in the glorious open spaces around Missoula and beyond (including on MNPS outings!); she loves a good IPA.

Caroline is excited for the adventures that await, and her MNPS family wish her only sunny days ahead.

RECORD NUMBER OF NEW MEMBERS!

The Montana Native Plant Society welcomed a reccord 88 new members last quarter!
We would like to welcome and thank new members from the following chapters:

Calypso Chapter

Natasha Chadwell, Riley Crissman, Dorothy Dehart, Sally Galore, Bobbi Schwarz, and Jamie Sullivan

Clark Fork Chapter

Barbara Amidon, Molly Anton, Daniel Armstrong, Jessica Giuliani, Ann Hatcher, Elizabeth Johns, Christine King, Roberta M. McElroy, Katelyn Mostad, Sally Mueller, Kay Nash, Kapp Nichol, Kylie Paul, Eric Pfalzer, Peter Rice, Leah Rissien, Lucy Rummler, Andrea & Don Stierle, Robin Taylor-Davenport, Megan Thornton, Ron Torretta, and Linda Wilson. Renewing as Lifetime Members are Charles Miller, Caroline Kurtz, and Mary Ann Flockerzi

Flathead Chapter

Janet Bones, Shirley Folkwein, Eric Godin, Monica Haaland, Karen Hinman, Kathryn Hutton, Elizabeth Maurer, Mary T. McLelland, Linda Miller, Michael Moffitt, Julie Neff, Luke Oursland, Christina Schmidt, Janna Shennan, Andrew Smith, Lynn Smith, Lynne Vanhorn, Jon Wagner, Angela Williams, and Marilyn Wood. Renewing as Lifetime Members are Terry and Dennis Divoky

Kelsey Chapter

Rachel Amthor, Heather Foslund, Elena Johnson, Conner Mertz, and Marty Stebbins. Renewing as a Lifetime Member is Bryce Maxell

Valley of Flowers Chapter

Emily Almberg, Lee Barbisan, Martha Collins, Susan Ewing, Jennifer Heiss, Larry K. Holzworth, Joana Kirchhoff, Kim Kotur, Doug McSpadden, Steve Mohler, Peggy and Tom Olliff, Adele Pittendrigh, Cara Priem, Carol Rydell, Becky Saleeby, Amber Smith, Timothy Toothey, and Henry White. Joining as a Lifetime Members are Robert Fimbel, Michael Manship. Renewing as Lifetime Members are Susan Tallman, and Catherine Jean & Jay Frederick

Eastern-At-Large

Lael Berner and Andy Sorg. Renewing as a Lifetime Member is Leah Grunzke

Western-At-Large

Cliff Bara joining as a Lifetime Member, William Howell, and Anthony and Ashley South

What "Firebirds" Can Teach Us About Habitat

By Ben Deeble, Big Sky Upland Bird Association

People who have seen the fascinating dawn display of Sharp-tailed Grouse (*Tympanuchus phasianellus*) dancing on their traditional spring breeding leks may come away with the impression that they have observed a very special bird in a very specialized habitat. And while arguably correct about the bird and its display, lek habitats themselves are one of the least particular for ensuring grouse population survival.

Today Sharp-tailed Grouse are widespread and common in Montana east of the Continental Divide. However, populations are struggling in parts of their range, particularly along the southwest periphery extending into Nevada, and they have entirely disappeared from seven states while still occurring in twenty-two, including Alaska. They are one of only two grouse species found in the mixed prairie grasslands, shrublands, and sagebrush steppe of Montana.

Photo © Craig Miller

In the Lakota language the Sharp-tailed Grouse is called Cansiyo ("Fire Bird"). First People observed that these grouse became more abundant in areas transformed to grasslands and young shrublands by fire. In particular the Sioux may have been observing areas where evergreen tree densities were reduced by fire, and plant communities shifted to earlier successional stages better suited to sharp-tail nesting, foraging, and winter survival.

Habitat relationships have been well documented in numerous studies (Parker 1970, Oedekoven 1985, Marks and Marks 1988, Berg 1990, Weddell 1992, Cope 1992). Prime habitat for Sharp-tailed Grouse includes a mixture of open grasslands (*Festuca*, *Stipa*, *Elymus*, etc.) interspersed with groves or stringers of deciduous trees or shrubs. Leks may be located on mowed wet meadows, livestock-trampled areas, low ridges, recent burns, forest clear cuts, shorelines, rodent colonies, dirt roads, and other areas with low sparse vegetation allowing good visibility and unrestricted movement, especially areas near dense herbaceous vegetation for escape from predators, particularly avian (Prose 1987, Deeble 1996).

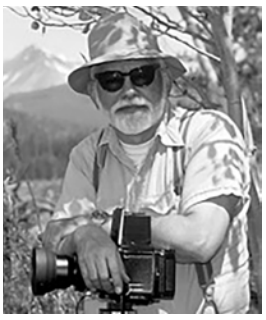
In spring and summer these birds exploit forbs, both natives like yarrow (*Achillia*), buttercup (*Ranunculus*), sunflower (*Helianthus*), vetch (*Vicia*), and hawkweed (*Hieracium*), and exotics like salsify (*Tragopogon*) and dandelion (*Taraxacum*). Several agricultural crops are also utilized seasonally, leaf and seeds of leguminous plants like alfalfa (*Medicago*) and lentils (*Lens*) in summer, and cereal grains like wheat (*Triticum*) and barley (*Hordeum*) through the fall and winter.

Sharp-tailed Grouse are not regularly migratory, though they are documented to move tens-of-miles. In comparison to the aptly named Sage-Grouse (which consume almost nothing but *Artemesia* leaf through winter, and will migrate to find it), during the harshest winter conditions Sharp-tailed Grouse have a broader and more plastic diet, but dominated by cured fruit and dormant buds of deciduous plants. Sharp-tails may even be a significant agent enhancing shrub dispersal and germination via year-round frugivory and scarification of native plant seeds.

(to be continued in a subsequent issue; citations to follow)

In Memoriam: H. William "Bill" Gabriel III

Bill Gabriel, a champion for managing wild lands, passed away 7 April 2020.



Bill began his lifelong immersion in the natural world growing up on a farm in rural Virginia and as an active Boy Scout. He later earned a BS in forest & wildlife conservation from Virginia Polytechnic Institute, summering as a smoke chaser and timber cruiser.

Serving in the Army, initially in the U.S. Army Mountain & Cold Weather Training Command, he later was transferred to the Fort Bragg, NC military base forestry branch, where he helped manage southern pine forests. He had an accomplished career with the U.S. Forest Service as a forest inventory specialist and timber management planner on several national forests in the Great Basin and Rocky Mountain West. During his 32 years with the Forest Service, he became an expert in mapping, describing, and inventorying forest stands. Bill also spent a year in Ecuador, with the United Nations, inventorying and mapping a rainforest wilderness twice the size of Yellowstone National Park. From dugout canoes, he cataloged nearly 500 tree species that were until then unidentified.

Dr. Gabriel earned a PhD in wildlife biology at the University of Montana and worked in Alaska on land and resource conservation issues. He also helped found the Anchorage Audubon Society. After retiring in 1985, Bill became a widely published photographer and writer.

Small But Mighty
2021 MNPS Grants

By Anne Garde, Clark Fork Chapter and Small Grants Committee Member

The MNPS Small Grants Committee received twelve proposals this year, some for new native gardens, some for restorations, and some for research and education. The Committee and the MNPS Board of Directors are very pleased to fund three projects around the state for a total of $3,350. Congratulations to the recipients!

K. WILLIAM HARVEY POLLYWOG PARK RESTORATION

In the middle of the Mission Valley, on the Flathead Reservation, in the small town of Ronan, there's an interpretive park located behind the K. William Harvey Elementary School. This park, Pollywog Park, was first established 20 years ago as a place for students to connect and familiarize themselves with native plants of Montana. The park was an effective teaching tool for 10 years before it was abandoned for unknown reasons. There is now a community-wide effort to restore the park as a permanent feature to the school. The Lake County Conservation District will be working along with the school's FoodCorps Service member, school staff, and AmeriCorps members to rejuvenate Pollywog Park.

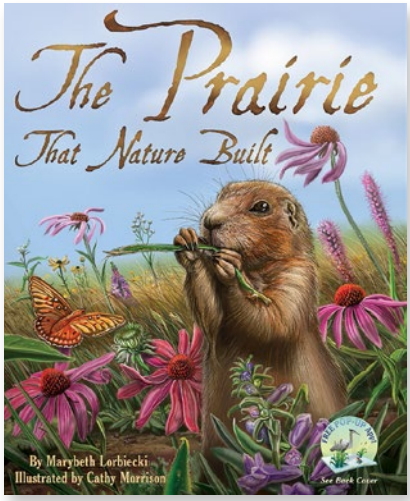
The park will be a place based learning location for the student body of 416 students (217 of whom are Native American). Students will learn about native plants and indigenous knowledge about those plants. Teachers will have access to the park for their science, social studies, math, and Salish language classes.

MNPS funds ($1,500) will go directly to the purchase, planting and establishment of native seeds, starters and shrubs, as well as restoring and updating the walkways and signage.

EXPERIENCING THE PRAIRIES THROUGH HOPA MOUNTAIN'S *STORYMAKERS*

Hopa Mountain is a Bozeman nonprofit that invests in rural and tribal leaders and works with them to create "a mountain of hope" for future rural and tribal communities. *StoryMakers* has been part of Hopa Mountain since 2006. Working through 100+ rural and tribal volunteers across Montana, Hopa Mountain's *StoryMakers* program offers parents of 11,000+ children, ages zero to 10, high quality books and other early learning resources to create home environments that give children the best chances for success in their lives.

StoryMakers asked MNPS for funding to buy 300 copies of *The Prairie That Nature Built*, an informational rhymed picture book that, through text and beautiful illustrations, describes the components of a prairie from soil partners, roots and pollinators to plants, grazers and predators to lightning and fire. The goal is to bring to young learners an awareness, understanding and appreciation of this important native plant ecosystem. Hopa Mountain has well established volunteer-led distribution programs in rural and tribal communities and is ready and able to deliver these books in spring 2021.



MNPS funded this project for the cost of the books: $1,500. (Dawn Publications is offering the educator's volume discount for these books.)

Bumble bee (Bombus sp.) on Wavyleaf thistle (Cirsium undulatum). Photo by Matt Lavin.

MONTANA NATIVES AND POLLINATORS INTERPRETIVE PROGRAMS

This project will focus on educating visitors to Tongue River Reservoir State Park about Montana's native plants and pollinators and about the effects of invasive plant species. The project will consist of two different educational programs, one focused on Montana native plants and one on native pollinators. These programs will be given twice this summer at the park. Each program will feature information about the topics, hands-on learning experiences, and take-home projects.

One program will focus on native plants, their environmental benefits, and the importance of preserving them. Attendees will learn that native plants help to preserve biodiversity. During this program, attendees will be able to plant their own container garden with native plants they can bring home with them.

The second program will focus on the importance of native pollinators, their job, and why native plants are crucial to their survival. During this program, attendees will be able to make a bee house out of wooden boxes and cardboard that they can bring home and hang outside.

Seed balls will also be available for attendees to bring home to start their own native gardens. MNPS funded this project at $350, covering the cost of bags of soil, seed packets from Native Ideals Seed Farm, unfinished wooden boxes, fabric pots and more.

Conservation Corner

By Peter Lesica and Elizabeth Bergstrom, Conservation Committee Co-chairs

The Pryor Mountains and the adjacent desert on the border with Wyoming are home to numerous rare plants and plant communities. The Montana Native Plant Society designated the area an Important Plant Area in 2012 (Important Plant Areas, mtnativeplants.org). The Bureau of Land Management (BLM) designated a portion of the Pryor Mountain Desert as an Area of Critical Environmental Concern in 2015 as part of their most recent resource management plan. In spite of the obvious importance of this area to biological diversity, BLM proposed to allow exploratory drilling for a gypsum mine in the area in 2020. MNPS, the Center for Biological Diversity and the Pryors Coalition objected to the proposed exploration and pointed out the inadequacies of the environmental assessment. One of the many deficiencies was the BLM's failure to consult with the Crow Tribe on the archaeological values of the area. We are hoping that BLM will reconsider allowing mining activity in the area or that the new Secretary of the Interior will withdraw the area from mining activity. Concurrently, the Center for Biological Diversity, MNPS and the Pryors Coalition have submitted a petition for emergency listing of thick-leaved bladderpod (*Physaria pachyphylla*) under the Federal Endangered Species Act. This rare mustard occurs only in a small area of the Pryor Mountain Desert and adjacent Wyoming. Much of this small range is in the proposed mine area. We hope that this petition will prompt BLM to reconsider the proposed mining activity.

MNPS has also provided written response to HB 418 – Establishing the Public Land Access Act. The bill currently being promoted within the Montana State Legislature asserts that "even the barest foot trail" on public, federal lands could qualify as a "state highway." This 2021 legislation stems from an interpretation of laws associated with the Montana Territory, prior to statehood. The purpose of the act is aimed at resource extraction on federal lands including National Forests and Lands administered by the Bureau of Land Management, and would include access into Wilderness areas. It could also include federal lands managed as national parks and monuments. HB 418 does not respect compliance with Federal Agencies once a state right of way is declared despite compounding issues such as watershed or fisheries protection.

In addition, Federal Agencies have recently completed extensive and detailed travel management plans on public lands. These efforts have included many public meetings and careful identification and deliberation over individual access routes. The proposed legislation thwarts these comprehensive efforts and public participation. This legislation is a thinly disguised rouse to disregard these in-depth analysis efforts. The travel management plans accommodate multiple use on public lands, and provide resource protection to watersheds, native plant communities and wildlife habitats. HB 418 is an extremely contentions piece of legislation no doubt increasing economic impact to federal agencies to address degradation.

The MNPS response letter to this proposed legislation raised the issues of noxious weed infestations and soil erosion associated with the use of questionable substandard paths suddenly converted to roads. Additionally, rare plants and sensitive plant communities will be detrimentally impacted. An increased fire risk will also be associated with the use of substandard routes. If HB 418 is passed, expensive litigation of its effects would be experienced for years.

Upcoming Whitebark Pine Conference

The Whitebark Pine Ecosystem Foundation announces a new date and a different way to conduct an international meeting.

The Whitebark Pine Ecosystem Foundation has rescheduled the international conference on the Research and Management of High Elevation Five Needle Pines in Western North American to October 5-7, 2021. This year the conference will be held virtually, which means you can participate and attend from your home or work office environment.

Everyone is invited – this means you. Visit the conference website at www.highfivepines.org for details on presenting your paper or poster, becoming a sponsor and to register for this important science meeting.

With this conference the Whitebark Pine Ecosystem Foundation intends to: (1) bring together scientists, managers, and concerned citizens to exchange information on the ecology, threats and management of these important pines; 2) learn about the threats and current status of pine populations; (3) describe efforts to mitigate threats through restoration techniques and action plans; and, (4) build a foundation for the synthesis of research efforts and management approaches.

Gardener's Notebook

Using Native Plants in Backyard Landscaping

Chokecherry:

Prunus virginiana (Rosaceae)

By Leah Grunzke, Eastern -At-Large Chapter

An Abundant Delight

As endlessly curious plant lovers we may be inclined to tune out the ordinary, to assume that the common is somehow less spectacular than the rare. As gardeners, however, it can be just as satisfying to seek out species that make comfortable friends. For a familiar staple, infinitely tolerant and adaptable, that shines in all four seasons, we need look no further than the common chokecherry.

Prunus virginiana is one of Montana's seven native species of *Prunus*, Latin for plum or cherry. This member of the Rose family makes a large, billowy shrub, 15-30' tall and nearly as wide, with deep glossy-green leaves that turn a vibrant burnt orange in fall. Heavily scented and highly ornamental racemes of creamy flowers appear in late spring, giving way to drupes (cherries) in late summer. The pea-sized fruits are near black and hang heavy on the plant, offering up an indulgent banquet for birds and other berry pickers. The variety *melanocarpa* is squatter with plump black fruits; the taller variety *virgniana* yields deep crimson cherries. Chokecherry are found in abundance throughout Montana, and indeed all over North America, growing in low mountain forests, riparian thickets, stony grasslands and along roadsides.

Wildlife Value

Chokecherries provide year-round food and shelter to a host of creatures. The bottlebrush-like flowers are a rich source of pollen and nectar for native pollinators, and chokecherry is a larval host to species like the small-eyed sphinx and Columbia silkmoth. Autumn is when these shrubs really shine as their plentiful fruit brings in dozens of bird species. The leaves and twigs are a nutritious browse for mammals, although they can be toxic to sheep and cattle in early spring. Chokecherry stands form a dense thicket with wide-spreading rhizomes, providing valuable wildlife cover and stabilizing properties for slopes and streambanks.

photos by Leah Grunzke

Uses

Throughout history this bountiful shrub has provided people with a reliable source of food and medicine. One can easily harvest gallons of cherries from even a small patch, while still leaving plenty for the birds. Chokecherries can be eaten raw, although they are quite tart. Boil and mash the cherries with equal parts water to get a distinctively creamy juice that can be enjoyed as-is or sweetened to make excellent syrup and jelly. They can also be dried and stored, ground into a flour, or even used as a natural fabric dye. The seeds, along with new leaves and twigs, contain small amounts of hydrogen cyanide. Extremely toxic in large quantities, this compound is neutralized when cherries are dried or cooked.

The chokecherry makes an exceptional choice for urban plantings and backyard habitat building. It thrives whether you fuss over it or not, and will happily be at home in nearly any space you choose. Enjoy this splendidly common shrub for its versatility, for its dazzling displays of flower, fruit and fall color, and for its generous benefits to creatures wild and tame.

Grow your Own

Cold-stratified seeds will germinate, but it is easiest to root softwood cuttings in summer or separate suckers in spring. Plant in sun or dappled shade in nearly any soil type except hard pack clay. Protect and water well for the first couple years; it grows lavishly once established. Chokecherries are moderately fire and drought resistant, and are cold tolerant to Zone 2 (-40°).

Election Time is Here - Get Ready to Vote!

Despite the cancellation of the scheduled 2021 Annual Membership Meeting, the Board of MNPS asks you to choose our statewide Board positions. This year, we're voting for Society President, Treasurer and Western Director-At-Large. Please read the candidate profiles and fill out the enclosed ballot, or vote online at www.mtnativeplants.org by June 15. We'll announce the result at a virtual Membership Meeting, date TBD, and in the fall issue of *Kelseya*.

President's Platform

By Gretchen Rupp, MNPS State President

When I'm in the woods I typically pay no attention to the trees around me unless one has a particularly artistic form or is dropping spruce budworm caterpillars on me. No forest in these parts has much species diversity, the trees all look alike, and there are millions of them.

Several things have reminded me recently that my obliviousness is badly misplaced. First were the two riveting online presentations regarding special trees that MNPS was fortunate to host this winter. Diana Tomback made vividly clear how a "keystone species" works in an ecosystem, profiling the whitebark pine for us. This tree is charismatic for several reasons: its form, where it thrives on the landscape, and its inescapable link to the clever Clark's nutcracker. Unfortunately, we also need to be paying attention because of the calamitous decline in living whitebark stands throughout its range. In the future, I'll be spying out healthy trees whenever I traverse whitebark "ghost forests" – looking for the tough individuals, that, with human help, will carry this very special tree into the future.

Steve Arno and Carl Fiedler detailed the significant place the Douglas fir has in North America. We're acquainted with this tree's importance as a source of timber (and sustainer of western communities), as a forest keystone species and as an invader onto unburned grasslands. We need to broaden our perspective. This tree is amazingly versatile, adapting to and thriving in habitats from rain forest to desert, ranging from Mexico to British Columbia.

There are more abstract aspects of trees that are drawing attention these days. Could an organized, global tree planting campaign make a significant dent in the inventory of atmospheric carbon? A hard-nosed investigation into that possibility suggests the answer is "no." Trees hold a LOT of carbon, compared to any other type of ground cover, but they are labile (most die or are harvested within 100 or 200 years releasing their carbon back to the atmosphere). We need to sequester carbon for much longer than that to seriously impede climate change.

There are very good reasons to plant trees – for their aesthetic value, to support their partner species (like the Clark's nutcracker), for their shading, wind-stopping, and snow-catching abilities and especially for erosion control.

At the limit of our scientific understanding is the fascinating question of communication among trees. In recent years forest ecologists have come to realize that the delicate fungi that surround tree rootlets (their "mycorrhizal associates") do more than move water and nutrients from the soil into the trees – they actually facilitate communication among individual trees. Some scientists are using the terms "memory," "learning," and "behavior" for what they measure among forest trees, and positing enhanced tree vigor and ecosystem resilience from these networks in the soil that may be akin to the nervous systems of animals. There's a lot more to learn, and a lot of reasons for me (us) to pay attention when we're out among our tree friends!

Photo by Rosella Mosteller

A Winter Field Trip

Clark Fork Valley Winter Shrubs and Mosses

By Paul Buck, Clarkfork Chapter

January 16th turned out to be an almost perfect day for winter botanizing. The Clark Fork Chapter held a masked walk down the Kim Williams Nature Trail along the Clark Fork River. The trail is the old Milwaukee Railroad bed and has had over 100 years of heavy disturbance but still has a wide variety of native (and of course a few non-native) shrubs, bushes and mosses. Fifteen very enthusiastic participants from around west central Montana divided into groups led by Peter Lesica, Joe Elliott and Rebecca Durham.

Plant morphological characteristics not usually used in the spring and summer were discussed and observed to identify the shrubs. Learning these characteristics gave us a much broader knowledge and appreciation of the local flora. Many of the more common woody plants, such as service berry (*Amelanchier alnifolia*), chokecherry (*Prunus virginiana*), snowberry (*Symphoricarpus albus*) and red osier dogwood (*Cornus stolonifera*) were studied and identified. A lone paper birch (*Betula papyrifera*), which is reportedly the only one in this section of the Clark Fork River, was perhaps the most unique of the day's observations.

Photo by Rosella Mosteller

With the lack of snow, we were able to find many mosses. North-facing cliffs provided a great environment. Joe Elliott generously shared his knowledge and enthusiasm and helped dispel some of the mystery surrounding these amazing plants. As with the shrubs, some of the more common mosses were identified. Five genera of mosses *Homalothecium* (golden curl moss), *Syntricia* (star moss), *Grimmia* (dry rock moss), *Orthotrichum*, and *Hylocomium* (stairstep moss) were observed.

The two-hour, mile-long hike was a wonderful diversion from coronavirus and cabin fever of winter and was a chance to meet new friends and catch up with old ones. Our thanks and great appreciation to the leaders. We left with the promise to meet again in spring and summer to enjoy the shrubs and mosses in their full glory.

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CALYPSO CHAPTER - Beaverhead, Madison, Deer Lodge, and Silver Bow Counties; southwestern Montana

CLARK FORK CHAPTER - Lake, Mineral, Missoula, Powell, and Ravalli Counties

FLATHEAD CHAPTER - Flathead and Lake Counties plus Glacier National Park

KELSEY CHAPTER - Lewis & Clark, Jefferson, and Broadwater Counties

MAKA FLORA CHAPTER - Richland, Roosevelt, McCone, Sheridan, and Daniels Counties

VALLEY OF FLOWERS CHAPTER - Gallatin, Park, and Sweet Grass Counties plus Yellowstone National Park

All MNPS chapters welcome members from areas other than those indicated. Alternatively, you may choose to be a member At-Large. We've listed counties just to give you some idea of what part of the state is served by each chapter. Watch for meeting announcements in your local newspaper. Ten paid members are required for a chapter to be eligible for acceptance in MNPS.

Moving? Please notify us promptly of address changes at mtnativeplantmembership@gmail.com.

Your mailing label tells you the following:

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Use this form to join MNPS only if you are a first-time member!
To renew a membership, please wait for your yellow renewal card in the mail.

Membership in Montana Native Plant Society is on a calendar-year basis, March 1 through the end of February of the following year. New-member applications processed before the end of October each year will expire the following February; those processed after November 1 will expire in February of the year after. Membership renewal notices are mailed to each member in January. Please renew your membership before the summer issue of *Kelseya* so your name is not dropped from our mailing list. Your continued support is crucial to the conservation of native plants in Montana. ***THANK YOU!***

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About Montana Native Plant Society

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 Small Grants fund, or the general operating fund.

Your yearly membership fee includes a subscription to *Kelseya*, 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, or mailed to: Scott Guse, *Kelseya* Editor, 725 Twin Lakes Road, Whitefish, MT 59937.

- **Fall issue deadline is September 10**
- **Winter issue deadline is December 10**
- **Spring issue deadline is March 10**
- **Field Trip Guide issue deadline is April 10**
- **Summer issue deadline is June 10**

Please send web items to our webmaster concurrent with these dates, at:

Bob Person at: thepersons@mcn.net

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.

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Changes of address and inquiries about membership should be sent to **MNPS Membership, P.O. Box 8783, Missoula, MT 59807-8783**.

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