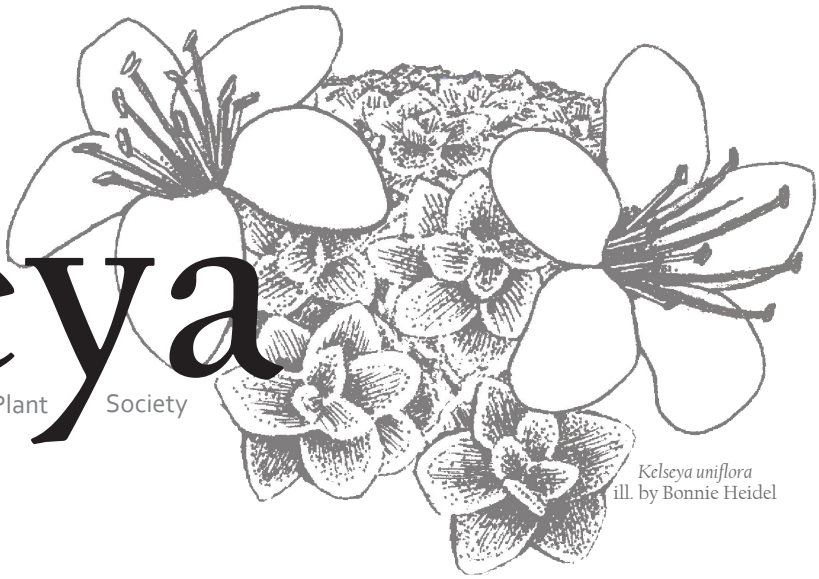
Kelseya
Newsletter of the Montana Native Plant Society



Kelseya uniflora
ill. by Bonnie Heidel

Thriving in an Unlikely Place

by Jenny Tollefson

On a hot morning in mid-August, I accompanied Peter Lesica and four botanists from the Bitterroot Valley MPG Ranch on a search for two rare wetland plant species. Our search took place in an unlikely location: the Western Montana Retriever Club (WMRC) property located on the southern edge of Missoula along the Bitterroot River. The WMRC was founded more than 50 years ago, and today, retriever enthusiasts use the WMRC property for dog training, field trials, and hunt test competitions. Approximately seven acres of the property are protected from development by a conservation easement that was negotiated by the WMRC, Missoula County, and The Nature Conservancy and which is currently stewarded by Five Valleys Land Trust. The property consists of riparian cottonwood forest, emergent wetlands, and numerous ponds and sloughs. It is not, however, pristine habitat: several of the ponds on the property were created following gravel excavation. Interestingly, gravel excavation and the creation of open water ponds resulted in increased habitat for two of Montana's rare plant species: toothcup (*Rotala ramosior*) and Columbia Water-meal (*Wolffia columbiana*).

Peter Lesica last observed these plants at the WMRC during a 1987 survey while working for The Nature Conservancy. The looming question now on our minds was: after 27 years, do these plants still occupy the site? We had half of our answer within just minutes as we walked onto the wet gravel edge of the first pond, looked down, and found toothcup flourishing at our feet.

Toothcup is an early successional species that, at the WMRC, grows in the bare gravel that is exposed when



Toothcup (*Rotala ramosior*). Photo by Peter Lesica.

continued on page 9

Chapter Events

Calypso Chapter

All seven of the Calypso Chapter summer field trips were very well-attended with several having over twenty participants. Many of the larger groups were mostly community members that were interested in learning more about native plants. We find that advertising events in local newspapers really increases community participation and raises public awareness of the MNPS. The annual Calypso Christmas Brunch will be 11am Sunday, December 7 at Linda Lyon's home outside Dillon. Bring a dish to share and ideas for 2015 Chapter activities. Call Catherine Cain 406-498-6198 with any questions.

Clark Fork Chapter

Thursday, October 9, 7:30 pm. There are numerous popular as well as technical books on plant identification. Bring your favorite or unusual plant identification books to show to your friends at what we're calling The Festival of the Botany Book. This is an opportunity to find the best moss, lichen or vascular plant books for your purposes and show the ones you have. Natural Sciences (Botany) Bldg. Rm 202.

Thursday, November 13, 7:30 pm. What was the vegetation of the Bitterroot Valley like prior to European settlement? How has it changed? Come hear Karen Shelly tell us about her research on The General Land Office Surveyor's View of the Bitterroot Valley Landscape (1870-1924). Rm L09 Gallagher Business Bldg, UM Campus.

Thursday, December 11, 6:30 pm. Our annual Christmas potluck will again be held in the Del Brown Room in Turner Hall on the UM Campus on the northwest side of the Oval. Parking will hopefully be available west of the Gallagher Bldg. in lots or on the streets off of Arthur and Connell. You will be emailed a map in early December. Bring plates, utensils and a dish to share. Alcoholic beverages are okay! Don't forget to bring a few of your favorite slides or digital pictures from the summer. Call Peter (728-8740) or Kelly (258-5439) if you have questions.

Monday, January 12, 7:30 pm. In the natural world, "everything is hitched to everything else." Come and hear Forest Service ecologist Yvette Ortega tell a surprising story of the Rippling Effects of Knapweed Invasion on Native Communities and the Erosion of Bird-song Diversity. This will be a joint meeting with Montana Audubon, Rm 123 Gallagher Business Bldg, UM Campus (note the different day and place).

Flathead Chapter

Monthly meetings are the 3rd Wednesday of the month in October through April at North Valley Community Hall, (also North Valley Physical Therapy), 235 Nucleus Ave., Columbia Falls unless otherwise noted.

Wednesday, October 15, 5:30 pm. Potluck Dinner. We'll be sharing adventures from the summer and planning events in the coming year, including the statewide annual meeting we'll be hosting in June. With no program, this evening gives us more time for socializing, getting to know other members, and catching up. Bring dishes, utensils, and some food to share.

Wednesday, November 19, 7 pm. Flora of the Bob Marshall Wilderness. To celebrate the 50th Anniversary of the Wilderness Act, Plant Ecologist and Conservationist Maria Mantas will present her botanical explorations through the Bob Marshall Wilderness, displaying common and rare native flora found there, from river bottoms to mountain peaks. Maria conducted vegetation and floristic surveys on the Flathead National Forest for 20 years before moving into a career of conservation, where she worked as Science Director for the Nature Conservancy. Maria currently is the Executive Director of the Swan Ecosystem Center based in Condon. Everyone is invited to a 5:30 meeting to discuss Plant Society business and activities. Sack dinners are welcome.

Wednesday, December 17, 5:30 pm. Annual Holiday Party, starting with visiting and refreshments and followed by a potluck supper. The gathering is at Sukey Pfirman's and Tim Strand's home at 937 Denver St. Whitefish. (Over the viaduct in Whitefish on Wisconsin, about .5 mile on right is Denver St. Turn right. Go to the cul de sac at the end of the street. House is on right.) Bring a potluck dish, beverages, an inexpensive or recycled gift and holiday cheer. For more info call Sukey at: 730-2537.

Kelsey Chapter

The Kelsey Chapter has emerged out of presidential bankruptcy and is staying alive. Patrick Plantenberg is in charge of program planning (contact 431-4615), Bob Person has taken on field trip scheduling (contact 443-4678), and Kathy Lloyd has returned as the president once again!

The Chapter awarded a $500 grant to the Townsend School District for a native plant garden to be installed this fall and next spring.

Here are draft plans for upcoming programs and field trips to date. Everything here is tentative. Other options could be added to or replace any of these. Dates, times, and details might also be changed.

Saturday, December 6, 6:00 p.m.: Holiday Potluck at the Dive Bakery in Helena.

January-February 2015: Scott Mincemoyer will teach a hands-on warm season grass identification class at Carroll College using pressed specimens. Come warm up your botany skills as you learn these warm season species that most cool season botanists don't often see in late summer. Date and final details TBA.

Maka Flora Chapter

Info: Libby Knotts at 774-3778, rek@midrivers.net.

Valley of Flowers Chapter

Unless otherwise noted, all programs begin at 7:00 p.m. and take place in room 108 of the Plant Bioscience Building on the west side of 11th Avenue, on the main MSU campus. For further information contact Jeff Copeland: 582-7671, jouzelcopeland@gmail.com.

Tuesday, October 14: Program TBA



Tuesday, November 18: Collecting and pressing plants - Matt Lavin will lead a short workshop on the how and why of collecting and pressing plant specimens for purposes of documentation, research, and teaching. A tour of the MSU Herbarium and a viewing of some of the original plant specimens in the herbarium collection will follow. Matt is a Professor in the MSU Department of Plant Sciences and Plant Pathology and Curator of the Herbarium.

Tuesday, December 9: Winter socializing - bring a potluck dish to share, and plan to trade ideas about programs and other chapter activities we could undertake in 2015.

Tuesday, January 13, 2015: Mandeville Creek Project - Abigail Breuer and colleagues will discuss the new project to restore Mandeville Spring Creek, which flows through central Bozeman and over the Bozeman High School grounds. There are a number of opportunities for MNPS involvement in the project, including in the teaching aspects, plus selecting, planting and maintaining native plants in the restored creek corridor.

Eastern At-Large

More details to come in the Spring and Summer issues of *Kelseya*. Info: Jennifer Lyman at 656-7869.

Western At-Large

Jon Reny (Libby) is working on activities for the year and would love to hear your thoughts. You can reach him at 334-0459, jreny@kvis.net.

Hike Report: Pyramid Pass

by Peter Lesica

Saturday, September 5 started cool and warmed up slowly. It was a perfect day to celebrate the 50th anniversary of the Wilderness Act, and that's just what 20 people did by climbing five miles to Pyramid Pass at the southern edge of the Swan Range, on a hike co-sponsored by the Montana Wilderness Association and The Montana Native Plant Society. While one of us climbed Pyramid Peak, the others split into two groups and hiked into the Bob Marshall Wilderness to see what wildflowers were still in bloom. We weren't disappointed and found 20 species still flowering, including leafy aster (*Aster foliaceus*), lady's-tresses (*Spiranthes romanzoffiana*), yellow buckwheat (*Eriogonum flavum*) and even subalpine buttercup (*Ranunculus eschscholtzii)* that usually flowers much earlier. We also saw quillwort (*Isoetes bolanderi*), a fern ally growing in a dried-up pond. On the way down we spotted two goldeneye ducks, but most of the hikers were busy eating huckleberries. We had to pry Beverly and her purple fingers off of the bushes or she would still be there.



Hikers enjoying the fall weather. Photo by Peter Lesica.

The Annual Exploding Battery "Adventure" Hike of 2014: June 21, 2014

by Jon Reny

This annual event needs to have the word "adventure" added to its name. Seems the hike is fraught with the unexpected and the 2014 hike was no different. This year we didn't have any batteries explode or snow block our way, or hike to a lake too full to get to the floating mats; instead, we didn't hike the expected trail. Rather than hike along an open ridge, we started near the Kootenai River and hiked uphill through changing forests till we reached a ridge coming off of Pulpit Mountain.

Eight folks showed up Saturday morning, excited to spend the day with Pete Lesica and fellow plant enthusiasts. Besides Pete from Missoula and trip leader Jon from Libby, there were two summer Forest Service employees (they were both from Humboldt State University in northern California), two came from the Whitefish area, one from Troy and another from Libby.

Because the hike began at a fairly low elevation and steadily went up and up and up, we got to go through a number of different forest types. Each type had a different set of plants to view and discuss. We finally made it to the ridge and then the trail actually followed the ridge, steeply up. By this time, two of our group had turned back. The others continued on (and up) through an area that burned about five years ago, till we reached some natural openings. There we devoured lunches, botanized, began a plant list (in bloom only), and guessed how many species we would list on the way down, and down, and down. Peter, of course, guessed closest to our 67 species.

Even though we didn't follow the trail we expected, everyone enjoyed the plants and views, the perfect summer weather, the time together, and the discussions we had while hiking.

PS - Three weeks later, Jon and his wife, Renee, did walk along the intended trail. Maybe next time…

News & Notes



President's Message

Fall is in the air and with it comes spectacular colors as trees and shrubs begin the process of senescence. Skunkbrush Sumac (*Rhus trilobata*), Common Chokecherry (*Prunus virginiana*) and Woods' Rose (*Rosa woodsii*) turn scarlet and orange even as the early snows splash them with white. Little Bluestem (*Schizachyrium scoparium*) turns from its fabulous blue to a warm coppery rust color topped with fluffy seedheads.

Berries ripen providing a fall harvest for birds, mammals and people. Blue Elderberry (*Sambucus cerulea*) provides a feast for hungry Evening Grosbeaks and Robins. Western Serviceberry (*Amelanchier alnifolia*) branches jump as a Townsend's Solitaire downs one berry after another. Cedar Waxwings gorge on Wax Currant (*Ribes cereum*) and Golden Currant (*Ribes aureum)* berries, gently chirping as they eagerly grab each berry.

Fall wildflowers splash their color with wild abandon and pollinators cover them in their last nectar gathering forays of the season. Rocky Mountain Beeplant (*Cleome serrulata*), Rigid Goldenrod (*Solidago rigida*) and Scarlet Gilia (*Ipomopsis aggregata*) are a few of my favorites that attract butterflies, bees, wasps, flies and even the occasional hummingbird that has stayed just a bit later than its friends.

Small birds flock to Maximilian Sunflower (*Helianthus maximiliani*) eagerly devouring its protein and fat rich seeds. Pine Siskins hang from Missouri Goldenrod (*Solidago missouriensis*) as they collect its small seeds and the red aphids that have remained on the plant this summer. Juncos hop across the fields gathering falling grass seeds before chipmunks and mice can gather them to their caches. Pine squirrels drop cones from the Ponderosa Pines left and right across the forest floor in their frantic fall sprint to gather their winter stores into holes and hollow logs.

It's a busy time in nature and a beautiful time to explore the out-of-doors and see what's happening among our native plants. Hope you have time to walk among them this fall!

— Kathy Settevendemie



Rocky Mountain Beeplant (*Cleome serrulata*).
Image courtesy USDA-NRCS PLANTS Database

Welcome New Members!

The Montana Native Plant Society welcomes the following new members:

Clark Fork Chapter:
Thea Koehler. Thanks also to Melissa Waggy for her lifetime membership and congratulations to Peter Lesica on his lifetime membership award.

Valley of Flowers Chapter:
Margaret Janne Hayward and Temia and Joe Keel

State–Eastern-At-Large:
Gene Ball

Do You Like Us?

Like MNPS on Facebook and you'll stay up to date on events, state-wide topics and other pertinent information. Find us at www.facebook.com/MTNativePlantSociety. You can also follow individual chapters; search for your chapter to find out more. For information about MNPS and Facebook, contact Clare Beelman at clare.beelman@gmail.com.

MNPS Small Grant Competition

The Montana Native Plant Society (MNPS) announces its 19th annual Small Grant competition for projects or studies that support the following objectives: 1) stimulate research, conservation and educational activities that help foster an appreciation of Montana's native plants and plant communities; and 2) promote native plant conservation through better understanding of Montana's native flora and vegetation and the factors affecting their survival. Project or study proposals must pertain to native plants of Montana. All proposals that meet the minimum criteria will be considered for up to $1000. However, proposals that demonstrate cooperation with others and generate data or public support for conservation of native plants in the wild are preferred. The competition is open to residents of Montana and to all members of the MNPS. The deadline for proposals is January 31, 2015. The winter edition of Kelseya and the MNPS website will include more information, or you may contact Betty Kuropat at bkuropat@centurytel.net.

MNPS Board of Directors Fall Meeting

Saturday, November 15, 10-4 pm at Westech Environmental Services on Airport Road in Helena

The board will be discussing plans for the upcoming year, reviewing the budget, hearing reports from chapter presidents, our webmaster, membership chair and various committee chairs on activities of the past few months. Anyone interested in submitting topics for discussion should contact either your chapter president or Kathy Settevendemie, board president @ 406.880.8809 or kathy@blackfootnativeplants.com.



Calypso Chapter members Karen Porter, Steve Sherman, Jessie Salix and Catherine Cain show off their hard work. Photo by Bill Cain.

The Calypso Chapter median in Dillon is doing well. Plants have matured and with some deadheading, many bloomed the entire summer season. We were surprised to have Evening Primrose that were blooming when we planted them, still blooming in September! Our biggest challenge has been the emergence of Bachelor Buttons and Calendulas from previous years. We will try to weed out these plants in late September when we clean the median up for winter. We did not take an aggressive stance this year because we wanted color as our natives matured. We will put a final mulch on bare areas of the median in preparation for winter. The Dillon community has been very appreciative of our efforts. Over the summer we put in 32 hours of weeding with Calypso members and UMW volunteers. It will be interesting to see what survives the waves of snow melting chemicals through the winter.



Flowers blooming in the median. Photo by Catherine Cain.

Annual Meeting Recap

ANNUAL MEETING REPORT

by Gretchen Rupp

130 hardy souls—including more than 40 first-time participants—gathered at Luccock Park above the Paradise Valley June 27-29, to celebrate the 2014 MNPS annual meeting and take advantage of this year's stunning late-spring bloom. Friday afternoon, workshops on grass identification, basic plant ID and native pollinators drew nearly 50 participants. On Saturday, ten field trips took to the hills. They focused on a wide range of subjects, including the Gallatin Petrified Forest, post-wildfire plant succession, native fungi, and using dichotomous plant keys in the field. Some field trips featured exciting contests with ankle-deep mud; others endured onslaughts of hail; still others dodged lightning. Thrilling creek crossings and brutal bushwhacks faced some participants. Remarkably, no one was lost, and all returned to camp with enthusiasm for drinking hot beverages and buying T-shirts. The plant ID contest, guest speaker, kids' activities, cool raffle prizes and Sunday morning forays rounded out a very successful annual meeting. Our hosts from the Valley of Flowers Chapter invite you to relive the fun via the many photos that are linked from the MNPS website.

2014 MNPS Election Results

MNPS voters reelected incumbent Vice President, Kathy Shelly from Missoula, and incumbent Secretary, Patrick Plantenberg from Townsend. A new Eastern-at-Large Representative, Jennifer Lyman from Rocky Mountain College in Billings, was elected.

Please take time to thank Dave Shea of Choteau, who served as Eastern-at-Large Representative for several years.

MNPS would not thrive without dedicated individuals to serve as officers and Committee Chair persons.

Thanks for your continuing support. See you at the polls in 2015!

Looking Ahead

Here's a heads up for 2016: the Calypso Chapter and the American Penstemon Society are co-hosting the 2016 MNPS Annual Meeting at Fairmont Hot Springs near Anaconda, June 24-26. Plan ahead, even though it's two years away; you'll want to schedule vacation time to join us. We especially encourage families with children to attend, since Fairmont is a great family resort and we will have many kid-friendly activities. Join us in 2016!



Hikers heading to Nurses Lake. Photo by Peter Lesica.

Nurses Lakes Field Trip

by Peter Lesica

The sky was not too promising on Saturday morning when we left Pine Creek, the site of the annual meeting, to drive around the north end of the Absaroka Range to Nurses Lakes. The lakes are found on the plateau-like ridge that separates the West Boulder River from the Boulder River. After a couple of false starts we found the trail—right about the time it started raining. We hiked up to the ridge and found a sheltered place for lunch in a grove of Douglas fir on a north slope. After lunch it stopped raining and we made our way to two of the Nurses Lakes. The grasslands were in full bloom in spite of being weighed down by rainwater. There was arnica (*Arnica sororia*), larkspur (*Delphinium bicolor*), geranium (*Geranium viscosissimum*) and even a few sugarbowls (*Clematis hirsutissima*). We sat around the lakes for a little while, and then headed back down the slippery trail as the rain started again.

Grasses Have Class!

by Patrick Plantenberg



Grass class neophyte honing his skills on grass field trip in the beautiful Paradise Valley. Photo by Patrick Plantenberg.

People commented after the 2012 Montana Native Plant Society (MNPS) Annual Meeting that they would like to see a formal education component at the MNPS annual meetings. Matt Lavin, Agrostology Professor from Montana State University, conducted a four-hour grass class as part of the 2013 MNPS Annual Meeting. Over 40 people registered for the free four hour grass class on a Friday afternoon surprising everyone—including Matt!

Requests poured in for another grass class in 2014. The 2014 four hour grass class was held in the outdoor pavilion at Luccock Park on Pine Creek south of Livingston, MT on Friday afternoon. The 35 students were enthusiastic. Matt taught the basic taxonomic characteristics of several common pressed grass species.

The formal lecture part of the class was followed by sessions allowing 4-6 grass neophytes at a table to practice keying out several grass species using Matt's grass key in Peter Lesica's Manual of Montana Vascular Plants. Each table had one or two of Montana's best botanists helping the students. The Montana Office of Public Instruction allowed students 3.5 CEU's for attending the class.

Then on Saturday, Matt led a grass field trip allowing students to practice their new agrostology skills on live plant specimens. Many thanks to Matt Lavin for teaching the class and leading the field trip.

Will other educational classes be offered at the 2015 MNPS Annual Meeting? Let the Flathead Chapter know that you would like another educational opportunity in 2015. Contact Flathead Chapter representative Tara Carolin at 406-260-7533.



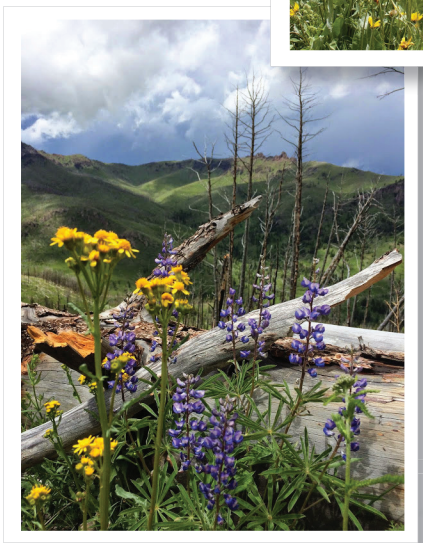
Matt Lavin teaching grass class at 2014 Annual Meeting. Photo by Patrick Plantenberg.

Annual Meeting Photo Gallery











Find more shots from the 2014 MNPS Annual Meeting online at www.mtnativeplants.org/Annual_Meeting

Small Grants Report: Weed Control and Study on Waterworks Hill Continues

By Kathy Heffernan, Science Teacher, Sentinel High School, and Betty Kuropat, MNPS Small Grants Committee

In 2013, Kathy Heffernan was awarded a small grant to help the Sentinel High School biology students study weed control methods on Waterworks Hill in Missoula. The study began in fall 2012 and the MNPS grant (and others) has allowed it to continue through the 2014-2015 school year. The spring 2014 results mirrored those from 2013 that were reported in Kelseya Winter 2014 (Vol. 27-2), page 8. That article was incorrectly titled "Weed Control on Mount Sentinel"; the project is on the other side of the valley on Waterworks Hill. A different group of students participated each of the three years learning weed and native plant identification, weed control methods, inventory and data collection, writing skills, and much more. As part of the project, students wrote 5-paragraph essays describing their work and results. Most of these students have learning disabilities involving reading or writing deficits, but they worked diligently on these essays. Enjoy these samples of their work:

Waterworks Hill Research
by Breanah, Dylan, and Kyleigh

Leafy Spurge is considered a noxious weed because it takes over space so that native plants can't grow. Elk, deer, and cows don't like to eat it because it doesn't digest and it gives them a stomach ache. It is a very aggressive plant. You should be concerned about Leafy Spurge because it can affect your animals if you are a rancher. One way to control Leafy Spurge is grazing by goats because goats eat almost anything. Also, Flea Beetles eat the plant to keep it from spreading. Burning will just cause it to spread. It is native to Europe and Russia. It was introduced to Missoula in the 1920's.



Students collecting data on Waterworks Hill. Photo by Kathy Heffernan.

On May 14, 2014, we hiked up Waterworks Hill. We had a garden hose that had an area of one square meter. We would throw the hose and see where it landed. Then we would pull the leafy spurge, knapweed, and other noxious weeds. We recorded the data so that we could compare this to last spring's data. We found an average of 6.4 knapweeds and 2.7 leafy spurge per square meter. In Plot #2, there were 2.2 more Knapweeds than last spring and 147 less Leafy Spurge than last spring. We think the Root Weevils are helping to control the Knapweed. We think the Flea Beetles are reducing the Leafy Spurge a little bit at a time. It takes a few years for the Flea Beetles to really have an effect.

In our research, we found a bio control bug that eats Leafy Spurge like the Flea Beetles does. Its name is Oberea erythrocephala (Leafy Spurge Stem-boring Beetle). It lays its eggs in the roots and they hatch during the spring and eat the roots. Another good way to control Leafy Spurge is to have goats and sheep eat the non-native plants.

Waterworks Hill Noxious Weed Paper
by Morgan, Jimmy, and Madi

Leafy Spurge is a noxious weed. It is considered noxious because it is hard on cattle's stomachs and it contains latex which can irritate a human's skin. Some control methods are herbicides and grazing with sheep and goats. Fire can sometimes help, but only if the spurge has already been reduced by other methods.

Spotted Knapweed is not digestible for most animals. It can take over and disturb overgrazed areas. Animals, such as horses, eat the plant and spread it with their manure. Three ways to control Spotted Knapweed are herbicides, insects (such as seedhead-eating flies), and livestock such as sheep and goats.

In May 2014, we counted Knapweed plants and Leafy Spurge stalks in weed study plots on Waterworks Hill. We ate Subway, then we went on a hike and found a dead bird. In our plot #2, we found that there were an average of 2.2 more Knapweed plants and 147.1 less Leafy Spurge stalks per square meter than last spring.

Last year, the students who studied Plot #2 pulled Knapweed, cut Leafy Spurge, and planted Goldenaster and Clarkia. In comparison, Hunter collected data on Plot #6 where herbicides were used. He thinks this was not effective in any way, shape, or form.

We propose these control methods:

(1) We would pull Knapweed because the students who pulled it last year had better results from pulling than just cutting or herbicides.

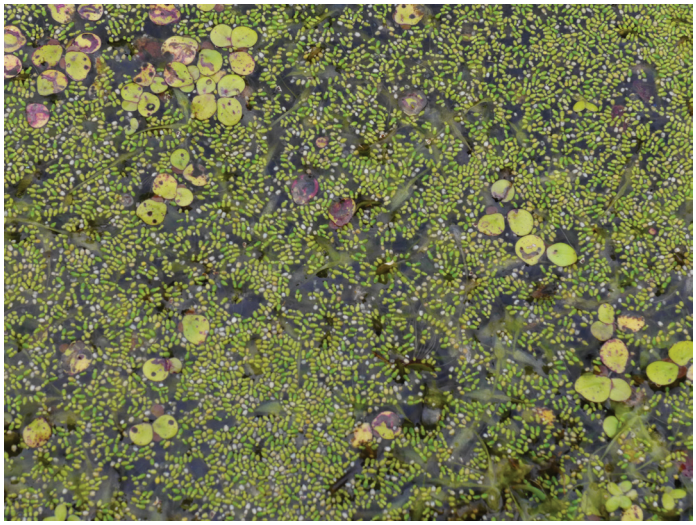
(2) For Leafy Spurge, we are going to cut stalks because the numbers have decreased immensely since last year, using that method.

the groundwater recedes in late summer. Toothcup is a small, flowering annual in the loosestrife family (*Lythraceae*). Although quite common globally (G5), toothcup is considered rare in Montana (S1S2), where it is known from only a handful of sites in the western portion of the state. Toothcup habitat consists of open, wet, gravelly soil around ponds and sloughs in valley bottoms. At the WMRC, toothcup appeared to be thriving.

The search for Columbia Water-meal proved to be a little trickier. Columbia Water-meal is a tiny, floating, aquatic perennial in the duckweed family (*Lemnaceae*). It is, in fact, one of the world's smallest flowering plants. Individual plants are difficult to see, but when it grows in large colonies, it creates a green haze across the pond surface. The plant is thalloid, meaning there is no distinction between the stem and leaf. Each thallus is less than 1.5 mm long - even lesser duckweed (*Lemna minor*) looks like a giant next to Columbia Water-meal. Like toothcup, Columbia Water-meal is widespread globally (G5) but uncommon in Montana (S2S3), where it has been observed in just eight locations--all in shallow, freshwater ponds and sloughs in valley bottoms.

Close inspection of the largest WMRC slough revealed only a handful of individual Columbia Water-meal plants scattered among the duckweed. Things weren't looking good, until we arrived at the first of the smaller gravel ponds and saw the characteristic green carpet indicating that Columbia Water-meal was flourishing. In each subsequent pond we visited, Columbia Water-meal was the dominant floating aquatic plant.

Our survey of the WMRC wetlands was a success, not only because we confirmed the continued presence of both toothcup and Columbia Water-meal, but also because we observed nearly 60 other plant species growing in the WMRC wetlands. This list included another rare species not previously known from this site: shining flatsedge (*Cyperus bipartatus*), which is only known from five locations in Montana--all on wet, gravelly shores of rivers, lakes and ponds in the Bitterroot Valley. Careful management over the years by the WMRC has allowed these plants to continue to thrive in the WMRC wetlands. Cooperation between the WMRC, Missoula County, Five Valleys Land Trust, the MPG Ranch, and The Nature Conservancy will ensure that these plants have the best chance for persistence into the future.



Columbia Water-meal (*Wolffia columbiana*). Photo by Peter Lesica.



Toothcup (*Rotala ramosior*). Photo by Jenny Tollefson



Shining flatsedge (*Cyperus bipartatus*). Photo by Peter Lesica.

Rocky Mountain Maple: A Sweet Shrub

by Kathy Lloyd

[The following is one of a number of botanical articles written by Kelsey Chapter members for publication in the Helena Independent Record*. —Ed.]*



The branching growth habit of *Acer glabrum*. Image courtesy Oregon State University Department of Horticulture.

You've seen it; I know you have! Of course, if you are expecting our local, native maple tree to look like those giant maples from New England, the Midwest or the Pacific Northwest, you might pass by our Rocky Mountain maple and not realize it. But sure enough, it IS a maple tree, with many of the same characteristics its bigger and better-known relatives brag about. Montana is home to two species of maple in the Aceraceae family. A third species of native maple, big tooth maple (*Acer grandidentatum*) has been reported from south-central Montana, but is not confirmed.

Rocky Mountain maple (*Acer glabrum*) is a branching, sometimes tree-like, shrub that can reach heights of 15 to 30 feet. It usually has several stems arising from the base. Acer is Latin for maple, and glabrum means "smooth and without hairs, " an apt name for this smooth-barked shrub. The leaves are opposite on the branch and are 3-5 lobed, the lobes usually having many sharp, unequal teeth. The leaf stalks, or petioles, are often bright red and stand out amid the green foliage. The rather forgettable flowers open with the leaves and are found in loose clusters called cymes. One of the best-known featurs othe maple is the fruit. Called a samara, these papery wings are the "helicopter wings" kids like to play with.

The bark of Rocky Mountain maple and boxelder (*Acer negundo*), Montana's second native maple, has been used for food, and the young shoots of Rocky Mountain maple may also be eaten like asparagus. The shoots and inner bark serve as emergency rations. Some Indian tribes utilized maple seeds for food. Most likely the seeds used were from a larger species of tree, but our Rocky Mountain maple seeds are edible for humans, as are the sugar-rich young leaves.



Acer negundo fall color. Image courtesy Oregon State University Department of Horticulture.

We aren't the only ones who have discovered the culinary benefits of maple. Maple buds, flowers and mature seeds provide food for many birds and animals. Both chipmunks and squirrels store the seeds in caches after removing the hulls and wings. Mule and white-tailed deer, elk, mountain sheep and moose browse on the sweet-tasting foliage and twigs.

Native American tribes used several species of maple for sugar. Early white settlers learned from Indian neighbors how to tap maple trees, and in New England, the favorite tree for sugar production was—and still is—the sugar maple (*Acer saccharum*). The boxelder may also be used for sugar production, especially in areas out of the range of the sugar maple (such as Montana). Unfortunately for us, Rocky Mountain maple is shrubby in our area, and so an unlikely candidate for serious sugar tapping.

American Indians also used Rocky Mountain maple for cradle frames, snowshoes, tepee pegs, bows, cordage and drum hoops. According to Jeff Hart, Montana tribes used Rocky Mountain maple for arrow shafts and found the wood flexible and hard.

Rocky Mountain maple is found in draws, ravines and woods, and on mountain slopes up to 6,000 feet. It occurs south to California, Colorado and New Mexico, and east to the Black Hills of South Dakota.

But perhaps the thing I like best about Rocky Mountain maple, never having tasted its sap, is the fact that fall is enlivened by its beautiful red leaves.

Kathy Lloyd is president of the Kelsey Chapter of the Montana Native Plant Society.

MNPS Chapters & the Areas They Serve

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. 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.

Your mailing label tells you the following:
CHAPTER AFFILIATION: CAL=Calypso; CF=Clark Fork; F=Flathead; K=Kelsey; MF= Maka Flora; VOF=Valley of Flowers
YEAR YOUR MEMBERSHIP EXPIRES: Memberships expire in February of the year listed on your mailing label.

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

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!

MONTANA NATIVE PLANT SOCIETY MEMBERSHIP

Name (please print)_____E-mail_____

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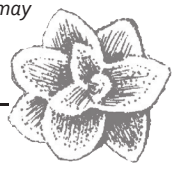
You will receive membership acknowledgement by email, as well as a pdf of the most recent Kelseya*. Future newsletter issues will arrive according to your preference indicated above.*

Membership Level	Dues w/affiliation	Dues w/o affiliation
Individual	$20	$15
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Canadian subscribers please add $4.00 to cover mailing costs. Additional donations may be specified for a particular project or the general fund.



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 communites 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 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 typed, saved in Microsoft Word or rich text format (rtf), and sent electronically to: carokurtz@gmail.com or mailed to Kelseya Editor, 645 Beverly Avenue, Missoula, MT, 59801.

Changes of address, inquiries about membership, and general correspondence should be sent to MNPS Membership, 398 Jeffers Road, Ennis, MT 59729. 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–Decemeber 10; Spring–March 10; Field Trip Guide–April 10; Summer–June 10. Please send web items to our webmaster concurrent with these dates.

If you want extra copies of *Kelseya* for friends or family, call the Newsletter Editor or email: carokurtz@gmail.com. No part of this publication may be reprinted without the consent of MNPS. Reprint requests should be directed to the Newsletter Editor.

Visit our website at: www.mtnativeplants.org or contact our webmaster Bob Person at: thepersons@mcn.net

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