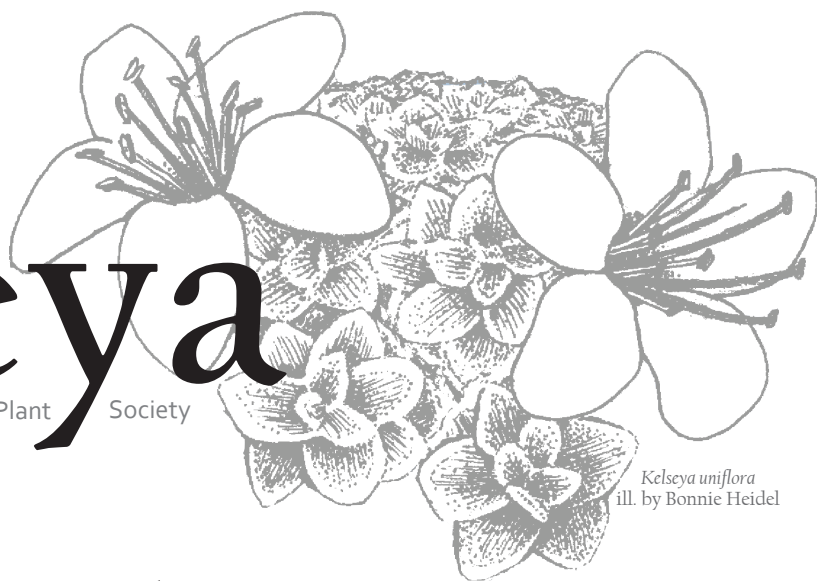


Kelseya

Newsletter of the Montana Native Plant Society



Kelseya uniflora
ill. by Bonnie Heidel

Diatoms: Montana's Other Native Plants

by Loren Bahls

Mention native plants and most of us think of flowering plants, those lovely green organisms with leaves, stems and roots that are all around us in our everyday lives. But there's another large and ubiquitous group of native photosynthetic organisms that scientists also classify as plants. They arose in the same geologic era as flowering plants and their genomes are equally complex. They have intriguing sex lives, and varied and involved life cycles. Ecologically, they are just as important in their habitats as flowering plants are in theirs. What they lack in size, they more than make up for in symmetry and delicate beauty. They are the diatoms (Kingdom *Plantae*, Division *Bacillariophyta*).

Diatoms are microscopic (or nearly so), eukaryotic plants distinguished by cell walls composed of silicon dioxide, a compound similar to the gemstone opal. Diatoms are important primary producers and CO₂ consumers in nearly all aquatic environments. They are at the base of food webs in lakes and streams throughout Montana. Stoneflies and mayflies graze diatoms just as elk and deer graze grasses and forbs. Diatoms are useful for biomonitoring and, as fossils in lake sediments, in reconstructing past climates and lake environments. Long a favorite with microscopists, diatom shells, or frustules, have exquisite beauty owing to their glassy cell walls, symmetry and delicate ornamentation.

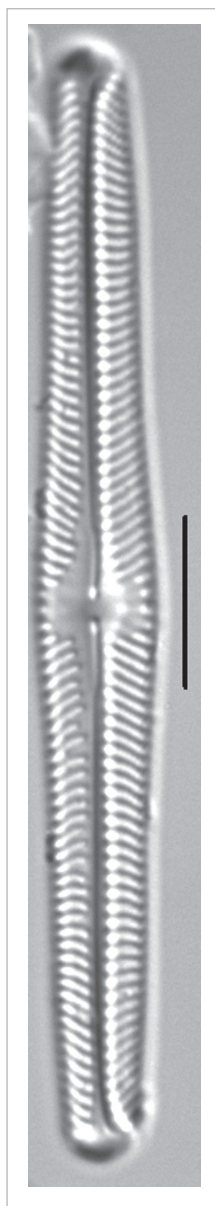
While the flowering plant flora of Montana is largely known, and finding and describing new species is an uncommon event, Montana's

diatom flora is largely unknown and our knowledge of diatom biodiversity is growing by leaps and bounds. In the past two years, 30 new diatom species have been described from samples in the Montana Diatom Collection at the University of Montana Herbarium, and many more await publishing.

Two of the new diatom species—*Navicula piercei* and *Navicula caroliniae*—are named for Montana botanists John Pierce and Tara Carolin, who have greatly assisted with diatom research in the state. Other new species are named for prominent diatomists, the Blackfeet, Crow and Kootenai Indian Tribes, and for geographical features in western Montana, including several in the Waterton–Glacier International Peace Park.

Diatoms have been neglected as a component of native plant biodiversity for several reasons. First, they are small; a large one is about half a millimeter long. Although small individually, diatom colonies and assemblages are often visible as gelatinous masses or slippery brown coatings on rocks in streams and along lakeshores. But to study and appreciate diatoms, you need a microscope.

Second, there are very few botanists who specialize in diatoms—there are only three in Montana. Third, until recently, very little of Montana or elsewhere in the United States has been sampled for diatoms. Fourth, a comprehensive, up-to-date key to diatom species in the United States does not exist. (But one is in the works—read on.)



Navicula piercei from Copper Lake,
northern Idaho.
Scale bar = 10 micrometers.
Photo credit: Loren Bahls

continued on page 6

Chapter Events

Calypso Chapter

Saturday, 4/7, 10am-2pm. 5th annual workshop on Gardening With Natives. Public welcome. Presenters include Beth MacFawn, "Southwest Montana Landscaping Projects with Natives;" Tim Meikle, "Picking the Right Native Plants for Your Landscape;" and Ellie Curry, "Hoop House Vegetable Gardening in Zone 3." Blackfoot Nursery will have a variety of native plants, seeds and books for sale. Meet at the Divide Grange Hall in Divide; bring a sack lunch and water. Info and RSVP: Catherine Cain, 498-6198 or nativeplants@montana.com.

Saturday, 5/19, 2-3 pm. Using native plants, Chad Larabee, production manager for the Montgomery Distillery in Missoula, will demonstrate "Botanical Distillation: Extracting Essential Oils From Plants" at the UMW Campus Community Garden in Dillon. Chad will demonstrate and discuss the process as it could be applied to a variety of native plants. The event is outside, so dress for the weather. Parking is available at the Garden. Info: Catherine Cain, 498-6198 or nativeplants@montana.com.

Saturday, 7/17-7/18. MNPS members are invited for a weekend of "Botany by Canoe" with Thomas J. Elpel, author of "Botany in a Day" and founder of the Jefferson River Canoe Trail (www.JeffersonRiver.org), a chapter of the Lewis & Clark Trail Heritage Foundation. JRCT is sponsoring a public canoe float on the Jefferson River on Saturday, July 17, followed by a potluck and optional overnight camp out. MNPS members can join or continue downriver with Tom on Sunday, July 18, for additional paddling, botanizing and foraging. Bring your own canoe if you can; if not, Tom may have extra canoes to loan out at no charge. Info and RSVP: Tom, thomasjelpel@gmail.com.

Saturday, 7/28, 9 am. Sheila Thompson leads an all-day field trip to explore the Flint Creek mountains west of Deer Lodge. We'll look for summer wildflowers, including prairie smoke, lupine, larkspur, pussytoes and others, then head west and hopefully have time to hike a mile to beautiful Rock Creek Falls. This field trip requires a high-clearance vehicle. Meet at the I-90 gas station north of town. Bring lunch, water and the usual Montana field trip gear: field manuals, rain gear, bug spray, sunblock. Info: Sheila, 846-1855.

Clark Fork Chapter

Meetings are held the second Thursday of the month at 7:30 pm in Room Log, Gallagher Business Building, University of Montana, unless otherwise noted.

Please check our website at www.mtnativeplants.org for updates, or call Kelly at 258-5439. Events may be canceled due to weather. Hikes typically proceed at a leisurely pace. Please bring adequate food, water,

sunscreen, a hat, and be prepared for Montana's unpredictable, inclement weather. No pets please!

Thursday, 5/3, 6:30 pm. Mt. Sentinel Budburst. Botanist Michael Krebs shows us which flowers and leaves appear first on Mt Sentinel. Hiking up the Evans Street Trail to the fire road, we'll see as many as 130 different species of plants. If there is interest, we'll hike a loop that goes up to the forest patch within 500 feet of the summit. We'll document the progress of spring as part of a long-term study incorporated into Project Budburst. Meet on the south side of the UM campus, at the corner of Beckwith and Madeline Aves.

Tuesday, 5/15, 6:30 -8:30 pm. Dyer's Woad Pull I. Help control Dyer's Woad, a noxious weed in the mustard family, and restore native grasslands during Wildflower Week. Wear sturdy shoes and bring rain gear. Meet at the Mt. Sentinel trailhead. Info: Marilyn, 544-7189.

***Wednesday, 5/16, 6:30 pm.** Spring Gulch Wildflower Mosey. Annie Garde and Madeline Mazurski lead an easy stroll up Spring Gulch in the Rattlesnake Wilderness to see wildflowers during Wildflower Week. We hope to see glacier lilies blooming in profusion. Meet at the Rattlesnake trailhead.
* Camera Geek trips are designed with ample time for photography and exchanging camera tips and techniques.

Thursday, 5/24, 6:30 pm. Plant Labeling Party. Enjoy hors d'oeuvres and sweets while preparing this year's plants for sale at the Missoula Farmers' Market. Bring your labeling fingers and a savory or sweet dish to share. Meet at 2 September Dr., in the Upper Rattlesnake. Info: Clare, 728-0189.

Saturday, 5/26, 8:00 am-noon. Annual Montana Native Plant Society Plant Sale at the Missoula Farmers' Market. More than 50 species of Montana native plants, from arnica to willow herb, will be for sale this one day at the Market. Come early for the best selection.

Tuesday, 5/29, 6:30 pm. Dyer's Woad Pull II. See 5/15 Dyer's Woad Pull for details. Info: Marilyn, 544-7189.

Thursday, 5/31, 6:30 pm. Exotic Plant Field Trip Revisited. Many people admire a perfectly trimmed, dandelion-free lawn. A lawn suffering benign neglect, however, can be a rich repository of plant life. Join us as we return to Peter Lesica's yard to inventory the biological diversity. Ten years ago we cataloged 34 species of naturalized plants in the bluegrass and smooth brome lawn. Come see what 10 more years of the same "care" has produced. Meet at 929 Locust in the Lower Rattlesnake, at the yellow house on the SW corner. Info: Peter, 728-8740.

Tuesday, 6/5, 6:30 pm. John Toole Park Weed Pull. Help John Pierce and other volunteers restore Missoula Valley's native grasslands. Bring a friend and a weeding tool and enjoy an evening near the Clark Fork River doing good for the community and environment. Meet northeast of the Waterwise Garden near the Kim Williams Trail in John Toole Park. Info: John, 542-2640.



Saturday, 6/16, 9 am. MPG Ranch Grasslands Excursion. Botanist Mel Waggy will introduce us to the MPG conservation ranch (www.mpg ranch.com) in Florence. Encompassing 8,790 acres, the ranch contains a mix of grassland, upland forest and riparian communities. Explore the native wildflowers and bunchgrasses of the early season and learn about MPG's efforts to protect and restore native plant communities. Bring water and sturdy hiking boots. This will be an approximately three-hour trip. Meet behind the IGA grocery store in Florence. Missoulians meet at the SW corner of the old Walmart off Hwy 93 South at 8:30 am to carpool. Info: Mel, 273-6140 or Kelly, 258-5439.

Tuesday, 6/12, 6:30 pm. Dyer's Woad Pull III. This is the last Dyer's Woad Pull of the season. See 5/15 Dyer's Woad Pull for details. Info: Marilyn, 544-7189.

Flathead Chapter

Monthly meetings are held the third Wednesday of each month at Glacier Discovery Square, 540 Nucleus Ave., Columbia Falls, unless otherwise noted. Programs begin at 7 pm; members are encouraged to come to the 5:30 business meetings beforehand to discuss and help plan MNPS activities. Feel free to bring a sack supper. Info: Rachel Potter at 892-2446 or Jen Hintz at 270-7028.

Wednesday, 4/18, 7 pm. Program TBA. This is the last chance to bid on the wonderful plant books from Dee Strickler's collection, donated by his wife, Claire. Bring your checkbook. Silent auction closes at 7:10, so come early to browse.

Wednesday, 5/16, 7 pm. "Beautify Your Yard With Native Plants: Tips, Tricks and Inexpensive Ways to Add Native Plants to Your Landscape." Laura Law will share her experience transforming her Columbia Falls yard from a mowed lawn to a collection of inviting small gardens that incorporate native plants. The presentation includes a 30-minute slide show, followed by a short stroll to see Laura's garden.

Tuesdays in May, 10 am-noon. Bigfork Wild Mile Corridor Wildflower Walks. Join Anne Morley and Neal Brown for a gentle stroll of spring birding and wildflower identification. This is an easy two-mile hike along the Old Swan River Road. Meet in front of Showthyme in Bigfork. Info: Anne, 886-2242 or Neal, 837-5018.

Saturday, 6/2, 9:30 am. Johnson Mountain Terraces. Enjoy a two or three-mile, easy, cross-country hike along a series of moist, mossy rock terraces with a variety of diminutive plants. Meet at the rest area at the soccer fields across from Grouse Mtn. Lodge in Whitefish. Bring lunch, water and your favorite plant ID book. Dress for changeable spring weather. Info and RSVP: Betty Kuropat, 892-0129.

Tuesday, 6/5, 5:30 pm. Columbia Mountain Field Trip. Join Glacier National Park Biologist Tara Carolin on a two-hour evening walk up the Columbia Mountain trail. Enjoy spring and early summer blooms along the forested trail that also offers lovely rock outcrops in the sunshine. Although the trail can be a little steep in places, the pace will be slow and we will be going only two or three miles at most. We could find close to 100 plant species. Meet at the Columbia Mountain parking lot and trailhead. Bring a sack supper if you like. Info: Tara, 888-7863 or writetaraywc@yahoo.com.

Wednesday, 6/6, 7 pm. Native Plant Garden Tour. Join Bill McClaren for a tour of the FVCC and Central School Museum Native Plant Gardens. Meet at FVCC, behind Blake Hall. If it is raining, meet inside. Tour is wheelchair accessible. Info: Bill, 257-2540 or mccl@bresnan.net.

Saturday, 6/16, 9 am. Dancing Prairie Preserve. Located just north of Eureka, this spectacular native prairie remnant has been set aside by The Nature Conservancy. The preserve also protects the world's largest population of the rare Spalding's catchfly. TNC botanist/ecologist Maria Mantas will guide participants through the rich mosaic of native grasses and prairie wildflowers. Bring water, lunch, hat, sunscreen and gloves for weed pulling. Meet in Whitefish. Info: Maria, 837-0066 or mmantas@tnc.org.

Kelsey Chapter

For information about Kelsey Chapter programs and events call Kathy Lloyd at 449-6586.

Tuesday, 4/17. Help select the winning artwork submitted by 4th grade students in honor of National Wildflower Week. The judging will take place at the Helena National Forest Headquarters. Info: Sam Chapman, 495-3718.

Wednesday, 4/25, 7:00 pm. ExplorationWorks! in Helena will host a slide show on Mt. Helena wildflowers with Bob Person and Mary Johnson. The cost is \$5 for members and \$8 for non-members. This will be followed with a field trip to see the plants on May 16. The hike is free and runs from 7 to 9 pm. Info: Amy, 457-1800, ext. 3.

Tuesday, 5/15. Bob Person and Mary Johnson will host a slide show on the flora of Mt. Helena. This is intended for, but not limited to, folks who will be volunteering their time on Mt. Helena the following week (see below). Meet at the Forest Service office. Info: Sam Chapman, 495-3718.

Monday, 5/21, 5:30 pm. Hike leaders for Wildflower Week will meet at the Mt. Helena parking lot to scout out flowers in bloom and to become familiar with the hiking route.

Tuesday, Wednesday, Friday, 5/22, 5/23 and 5/25. The Kelsey Chapter and other organizations will host area 4th graders on guided hikes and at educational stations. To volunteer, call Sam Chapman, 495-3718.



Wednesday, 5/23, 7:00 pm. Bob Person will host a free hike on Mt. Helena with Prickly Pear Land Trust. Meet in the Mt. Helena parking lot.

Saturday, 5/26, 10:00 am. Spring wildflower hike to Lewis & Clark Pass. Info and RSVP: Sam Chapman, 495-3718.

Maka Flora Chapter

For information on upcoming events and activities, contact Libby Knotts at 774-3778 or rek@midrivers.net.

Valley of Flowers Chapter

Tuesday, 4/10, 7 pm. Peter Husby will give a review of pollinators. Meet in Room 108 of the MSU Plant Bioscience Building.

Saturday, 4/21, 9 am. Earth Day. Join us for our annual Cleanup Day. Meet on Kagy Blvd. to weed the Northern cut. Bags will be provided for weeds and trash.

May-July, Dates TBA. Special Twig and Leaf tours, discover native plants along an in-town trail and hike in the mountains. Watch your email and the MNPS website for details. Info: Joanne, 586-9585 or jojen@bresnan.net.

2012 Small Grant Awards

by Linda Lyon, Small Grants Committee Chair

Congratulations to Sarah Dawe and Chantelle Gournay on being selected to receive MNPS's 2012 Small Grant Awards of \$1,000 each. Both projects are set to begin this spring.

Sarah Dawe: Native Plant Pollinator Garden, White Sulfur Springs Ranger District, Lewis & Clark National Forest.

The White Sulphur Springs Ranger District and its partners are constructing a native plant pollinator garden at the District office. This garden will serve to educate the public on the importance of pollinators to the survival of native plant communities. Phase one—garden construction and site preparation—was completed in 2011. Phase two will use MNPS funds to purchase native plants to plant the garden and complete the project.

Chantelle Gournay: Native Plant Learning Garden, Campus Community Garden, The University of Montana Western. The goal of this project is to develop a children's Native Plant Learning Garden (NPLG) within the UMW Campus Community Garden (CCG), which aims to foster curiosity about and understanding of the uniqueness and importance of Montana's native plants. UMW has several well-established programs that bring pre-school and K-12 students and their teachers to the campus on a regular basis to work with our science and education students. Over the past year, the CCG has been a platform for this interaction through site-specific projects and by providing an open green space for visitor use. The NPLG will include information about the science and folklore surrounding native plants, broadening the learning opportunities for student groups and all visitors to the site.

Welcome New Members

The Montana Native Plant Society welcomes the following new members:

Calypso Chapter:

Sheila Roberts, Mary E. Romenesko, Martha Apple and Teri Deakins

Clark Fork Chapter:

Stephanie J. Frostad, Laurie Randall, Ronald J. Pagel, Sandy Boehmler, Catriona Simms, Cynthia Hudson, Michael Krebs, Edward Monnig, Jacelyn Wedell and Andrew Short

Flathead Chapter:

Suzanne Brist and Debra Cater

Kelseya Chapter:

Jeff Van Tine, RB Rennick and Mathew Messer

Maka Flora Chapter:

Libby Knotts (renewing lifetime member) and Donna Babby

Valley of Flowers Chapter:

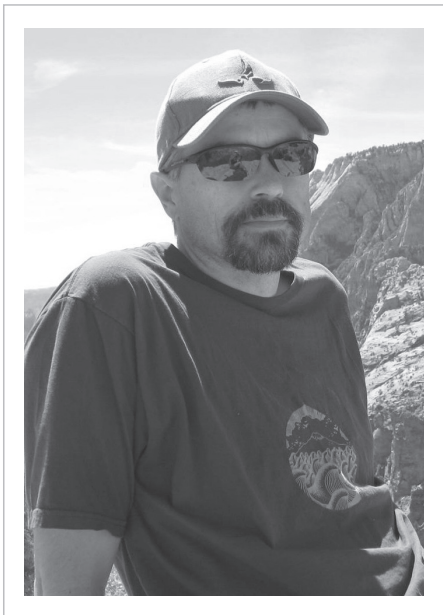
Michael Simanonok and Jeanne McCormick

State-At-Large:

Ronald Hartman, Emma E. Stewart and Anne Vandehey



President's Platform



On January 2, after several weeks of warm weather, I went for a hike in the foothills along the Rocky Mountain Front. Most of the ground was bare, and the only snow was in drifts in the lee of trees and ridges. At one point, I was walking along an exposed ridge and was astonished to see a single flower of *Douglasia montana* in bloom! Sometimes called mountain *Douglasia*, mountain pink or Rocky Mountain dwarf primrose, *Douglasia montana* is a small cushion plant that occurs on rocky, exposed ridges and slopes from lower elevations into the alpine. It is often the first native wildflower to bloom each spring on the Front, but normally not until mid- to late-March or early April. Was this just a single freak plant or was something else going on?

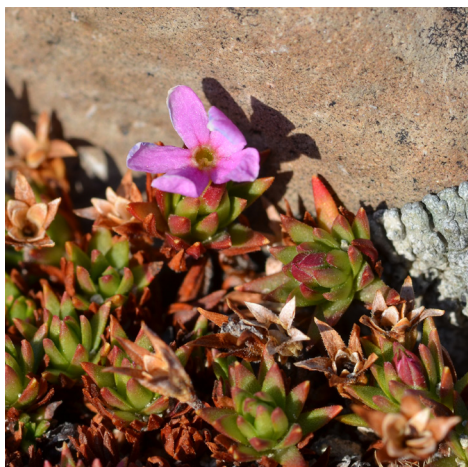
When I returned to the site on January 7, the same plant was still in bloom and another plant had a flower that was about to open. Not long after, we had several snow storms and some below-zero weather. I made another trip to the site in early February, and saw several flowers had opened on the second plant, plus numerous other plants with large flower buds that looked about to open.

I'm not sure what all the factors are that lead to flowering in *Douglasia*, but, given that more than one plant had flowered, it doesn't appear to have been just a single odd individual. The plants on that ridge were responding to some localized conditions that made the plants think spring had sprung. While there

had been several weeks of warm weather, they also had had to endure snow storms and below-zero temperatures. But, in some respects, that may not have been all that different from what they sometimes experience in March.

You can read more about past observations of Montana wildflowers blooming in January, including a record of *Douglasia* blooming in western Montana during the then record-setting warmth of January 1934. Check out the Spring 2005 edition of Kelseya (<http://www.mtnativeplants.org/filelib/229.pdf>). With a warming climate, these early bloom events may happen more often, so don't forget to look for flowers in the middle of a warm winter!

~ Dave Hanna



Douglasia montana in bloom. Photo by Dave Hanna.



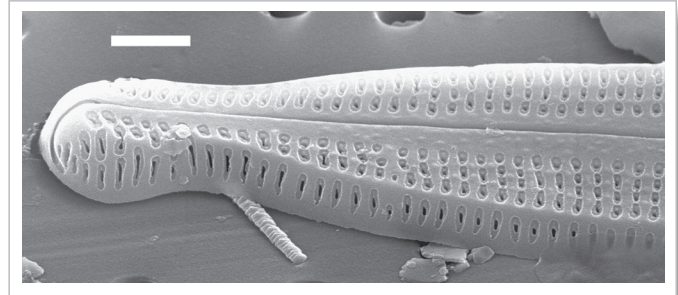
The first appearance of diatoms in the geologic record is in marine deposits from the Jurassic Period. Diatoms later colonized fresh waters, where they underwent a major explosion in biodiversity. Today there are an estimated 200,000 species of diatoms worldwide in 1,250 genera. But only about 24,000 species—less than 12% of the global diatom flora—has been named and described. In Montana, the known diatom flora is about 1,500 species, but an estimated equal number, many of them local or regional endemics, remain to be named and described.

In September 2011, The Flathead Lake Biological Station hosted the 21st North American Diatom Symposium, followed by a field trip to Glacier National Park. On the field trip we visited the type localities for several of Montana's new species. One small pond, near a major campground, is the type locality for two of the new species: *Nupela potapovae* and *Stauroneis pikuni*.

The types for these new diatom species are housed at the University of Montana Herbarium in Missoula, the Academy of Natural Sciences in Philadelphia and the California Academy of Sciences in San Francisco. A description of the Montana Diatom Collection and a list of the new species is available at the UM Herbarium website:

<http://herbarium.dbs.umt.edu/diatoms.asp>.

Loren Bahls is curator of the Montana Diatom Collection, a faculty affiliate with the University of Montana and a contributor to Diatoms of the United States. He has a Ph.D. in Botany from Montana State University and has been collecting and studying diatoms in Montana since 1966.



SEM closeup view of valve end of *Nupela potapovae*. Scale bar = 1 micrometer. Photo credit: Electron Microscopy Facility, Division of Biological Sciences, The University of Montana.

A Short History of Diatoms

Noted Dutch microscopist Antonie van Leeuwenhoek was the first to record the existence of diatoms, in 1703. He called them "animalcules" because some of them moved around under his microscope lens. This motion was later explained by the extrusion of mucilage from slits in the cell wall, a form of jet propulsion. Diatoms were later recognized as plants and a chapter on diatoms was included in Engler and Prantl's "Die Natürlichen Pflanzenfamilien." Famed botanist Charles Bessey wrote extensively about diatoms and proposed a classification scheme.

Today, diatoms are recognized as members of the advanced domain of life—*Eukaryota*—which includes animals and flowering plants.

The other domains are the more primitive *Archaea* and *Bacteria*. Each domain includes one or more Kingdoms.

Web Resource for Diatoms

To assist in diatom identification, a team of experts is assembling the first comprehensive and up-to-date online diatom flora for the United States. The Diatoms of the United States website (<http://westerndiatoms.colorado.edu>) is funded by the U. S. Geological Survey and housed at the University of Colorado in Boulder. Several of the new species from Montana are already posted there, as well as a Montana project to survey diatom biodiversity in the Crown of the Continent ecoregion. To access a description of the project from the home page, click on the "About" and "Projects" links.

Further Reading

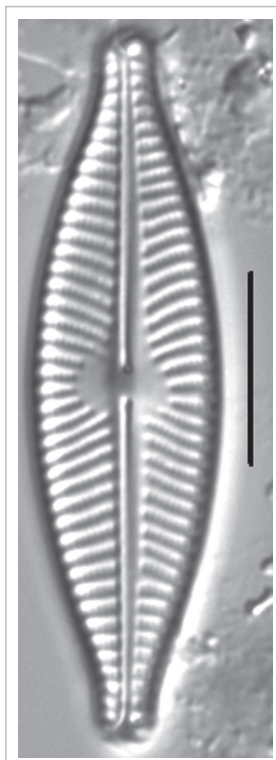
Seckbach, Joseph, and J. P. Kociolek (eds.). 2011. *The Diatom World*. Springer, New York. 534 pp.

Smol, J.P., and E.F. Stoermer (eds.). 2010. *The Diatoms: Applications for the Environmental and Earth Sciences*. Second Edition. Cambridge University Press, Cambridge, UK. 667 pp.



Above: Dr. Marina Potapova at Two Medicine Pond in Glacier National Park. Dr. Potapova is curator of the Diatom Herbarium at the Academy of Natural Sciences of Philadelphia. Photo credit: Loren Bahls.

Right: *Navicula caroliniae* from Bowman Lake, Glacier National Park. Scale bar = 10 micrometers. Photo credit: Loren Bahls.



Herbaria Images Online: Major New Web Resource Available

by Matt Lavin



The Montana State University Herbarium, administered by the Department of Plant Sciences and Plant Pathology, houses a collection of more than 80,000 preserved vascular plant specimens. These specimens serve to document the diversity and distribution of some 2,500 vascular plant species known to be native and introduced in Montana. This sort of information is used to foster plant conservation efforts, such as those conducted by the Montana Natural Heritage Program.

A recently funded project by the National Science Foundation, entitled "Consortium of Pacific Northwest Herbaria Online," has resulted in a web portal (www.pnwherbaria.org), through which images and associated information of 50,000-plus plant specimens housed in the MSU Herbarium are now accessible to the general public. This web site provides access to about 300,000 specimen images housed in 13 plant collections (herbaria) from the Pacific Northwest region, including those at the University of Idaho,

Oregon State University and the University of Washington. Idaho, Oregon, Washington and Montana are included in the Consortium portal because these are the four states originally included in the "Flora of the Pacific Northwest," published in 1973 by C. Leo Hitchcock and Arthur Cronquist.

Ecological, geographical and taxonomic information for an additional 1,400,000-plus specimens also is available through the Consortium. And by the end of 2012, the approximately 70,000 specimens housed at the University of Montana Herbarium (<http://herbarium.dbs.umt.edu/database/>) should also be integrated into this database.

What does this internet resource offer the general citizen interested in native and exotic plant diversity in Montana? From the home page, select the "Specimen Data" tab (<http://www.pnwherbaria.org/data>) to do one of three general operations: 1) download the specimen data from any or all of the collections (<http://www.pnwherbaria.org/data/datasets>), 2) obtain checklists of plant species for any of the counties within the states of Idaho, Montana, Oregon and Washington (<http://www.pnwherbaria.org/data/countylists>), and 3) search the entire data base for a particular species from a particular geographical region (<http://www.pnwherbaria.org/data/search>). Many of these operations cater to those who know how to manage and manipulate large amounts of information. However, the third option provides the opportunity for a general user to search for images of species of interest.

Let's say you want to know whether anyone has ever collected alpine *Lewisia* (*Lewisia pygmaea*) from southwestern Montana (Beaverhead and Madison Counties). You can go to the page that generates county checklists and select these two counties on the map, and then inspect the resulting species list for the occurrence of *Lewisia pygmaea*. You can also go the search page and enter "*Lewisia pygmaea*" into the "Genus" and "Species" fields and select that the specimens be returned to you sorted by state and then by county. You can then inspect the Beaverhead and Madison County sets of specimens for images and collection localities.

You may also be interested in where you can find the nearest population of, say, softstem or giant bulrush, *Scirpus validus* (or *Schoenoplectus tabernaemontani*). Type in the scientific name (including synonyms; this could be facilitated by searching for scientific names via the common name on USDA Plants database, <http://plants.usda.gov>). Then sort the returned specimens by "State" and then by "County." Because the Consortium of Pacific Northwest Herbaria Online Portal features a Google map, you can click on one of the orange dots on the map, which represent collection localities for species. Choose the orange dot closest to your location to discover the most accessible locality of the species of interest. You can also draw a polygon on the Google map to return specimens of this species within that perimeter (but this would return only specimens that have been geo-referenced, which doesn't yet include all imaged specimens).

Another interesting set of searches could include sorting the occurrences of state-listed noxious weeds or other invasive plants, in chronological order. Type in, for example, *Bromus tectorum* (cheatgrass), and have the results sorted by "State" and then by "Collection Year." If you did this for each of Montana's state-listed noxious weed species, you can see that most of our now-invasive plant species were common in the Pacific Northwest (and Montana) during the late 1800s and early 1900s.

Although the Consortium portal is up and running with many useful search features, many enhancements and corrections still need to be made. Over time, public access to information on Montana's plant diversity and distributions will improve.





Ovando Valley. Photo by Peter Lesica

Potholes to Sugarbowls in the “Prairie of the Knobs”

by Cedar Brant

MNPS's 2012 Annual Meeting takes place June 29-July 1 at Lubrecht Experimental Forest in the beautiful and unique Blackfoot Valley, called “Prairie of the Knobs” in the journals of Lewis and Clark.

When glaciers last retreated from the area, they left in their wake a extraordinary mix of features, including extensive riparian habitats along the Blackfoot and Clearwater Rivers, lush native grassland, ponderosa pine, fir and larch forests, and a spectacular mosaic of glacial pothole wetlands, bogs, fens and spring creeks that were described in the journals as “an extensive high prairie rendered very uneven by a vast number of little hillocks and sinkholes.”

The rolling rough fescue habitat and associated wetlands of the Blackfoot Valley is home to vivid spring and summer wildflower displays, and provides habitat for abundant bird life. More than 225 species of birds use this landscape, including resident trumpeter swans, black terns, sandhill cranes and many types of waterfowl. The valley is nestled at the southern edge of the Bob Marshall/Scapegoat Wilderness Complex where grizzly bears, wolverines, Canada lynx and other elusive wildlife wander out of the mountains and through the valley. The Blackfoot River is renowned for the trout that swim in its many pools and the fishing opportunities that abound.

Some field trips will venture along the grassy benches of the Blackfoot River, out through the hillocks of valley's pothole grassland and up into the boreal forests of the Swan Valley to sleuth for such rare species as Missoula phlox, Howell's gumweed and water *howelii*. Other forays will include a mountain bike tour of the Blackfoot Community Conservation Area and a visit to the historic buildings and forest flora of the Garnet Ghost Town (see insert for a complete list).

Evenings will be spent at the Experimental Forest, a camp and research station located 30 miles west of Missoula. The main hall will house our meetings, meals and merrymaking. Lodging includes dormitory-style boxcars or cabins, more deluxe rooms in the main lodge, and tent or RV camping. Friday night's dinner and entertainment will be held just down the road at the Blackfoot Native Plants Nursery (map: <http://g.co/maps/apheq>). Saturday night will include the annual plant ID contest and membership meeting, followed by a rousing line-up of awards, raffle prizes, slide show, silent auction and other entertainments. For further details and to sign up, fill out the registration form included or go to www.mtnativeplants.org. The green valley of the Blackfoot River in springtime awaits you. See you in June!



Seeking Silent Auction and Raffle Items

The Clark Fork Chapter welcomes donations of all kinds for the silent auction and raffle to be held during the Annual Meeting—plants, arts or crafts, photos, seeds, baked or preserved goodies, informational or recreational tours, gardening tools or services, cabin rentals, books, cards, etc.

If you (or your favorite business or hiking partner) would like to contribute a tax-deductible item or two, we would be much obliged if you would send the following information to Tarn Ream (tarn.ream@umontana.edu), or give her a call at 549-7933. Please include donor name, address, phone and email; a brief description of each item/service to be donated; a suggested opening bid and the value of the item or service (let Tarn know if you would like a donation letter for the IRS).

Last-minute donations are accepted at the meeting (please try to drop off ALL items with Tarn ASAP at the registration desk on Friday night, June 29), but anything that can be delivered in advance is much appreciated! Here is your chance to donate to a great fundraising event for MNPS!

MNPS Announces Board Candidates

The following people appear (or not) on the enclosed MNPS ballot:

Karen Shelly of the Clark Fork Chapter is nominated to serve again as Vice President, even though she fears she wouldn't have time to step up should something happen to Dave Hanna. (The Board assures her that they would help out in that case, and Dave appears to be in excellent health.) Karen has served as Vice President for the past three years. She is a graduate student in Geography at the University of Montana, where she is a Teaching Assistant for Cartography and Physical Geography and a Co-instructor for Biogeography. Prior to her move to Montana in 2005, Karen was the State Natural Areas Coordinator for the Missouri Department of Conservation.

Patrick Plantenberg of the Kelsey Chapter is nominated for Secretary, in which capacity he has served for several terms (and wonders whether term limits may eventually end his tenure; meanwhile he patiently awaits a contested election someday). Besides being the Election Committee Chairperson, he works as a reclamation specialist for the State of Montana, plants trees for the city of Townsend, and is an edible wild-plant enthusiast. He also is also active in civic organizations in Townsend.

H. Wayne Phillips, former President of the Great Falls non-chapter, has decided to retire from politics and will not run for Eastern Representative-at-Large in 2012. To date, no candidate has stepped forward to fill his shoes.

For the past nine years, the MNPS Board of Directors has offered \$100 to the Chapter that turns out the largest percentage of voters. The Maka Flora Chapter in northeastern Montana has won the prize every year but two! Can Maka Flora maintain its dominance? Or will they be beaten by the Annual Meeting sponsor, the Clark Fork Chapter, with its home field advantage?

MNPS members can submit ballots to the MNPS Electoral College via e-mail or hard copy (see insert). Go to the MNPS website at www.mtnativeplants.org and look for the link to the 2012 Elections. Please fill out the ballot and e-mail it to the MNPS Electoral College in Townsend at m2andp2@mt.net. If you prefer snail mail and the astute election analysis resulting from review of the hard copy ballots, fill out and return yours today and help your local Chapter defeat Maka Flora in 2012. Results will be announced and the \$100 awarded at the MNPS Annual Meeting. Thanks for voting!



Ovando Valley. Photo by Peter Lesica.



News & Notes

MNPS Plant Conservation

Conference Highlights

by Peter Lesica

MNPS hosted the 7th Montana Plant Conservation Conference at the new Montana Department of Fish, Wildlife & Parks' Montana Wild Center in Helena in mid-February.

The first day of the conference was devoted to learning about climate change, one of the most pressing conservation issues of our time. Heather Almquist began the session by reminding us that rapid climate change had occurred in the past and that the range of some species had changed, while others had not. Steve Shelly presented results of a study on western Montana trees, showing that in some cases mature trees have been growing better in the last 60 years. While this does not appear to be directly related to climate change, increasing levels of carbon dioxide in the atmosphere could be triggering the response. Paul Alaback reported on a 14-year study of first-flowering dates for wildflowers on a hill above Missoula. His study found that the phenology of plants in the Northern Rockies is particularly sensitive to changes in early spring temperatures, but there was a great deal of variation among species. Lindsey Bengston reported that plant species richness has increased over the past 10 years on four mountain summits in Glacier National Park. In contrast, Peter Lesica found that several species of wet-habitat, arctic and boreal species at the southern margin of their range have declined in Glacier National Park and in a large fen on the Rocky Mountain Front, while more widespread species have increased.

In the afternoon we heard about some directions on-the-ground land managers propose to mitigate the effects of a changing climate on natural resources. Dave Cole started the session by explaining the three options for managing natural areas in the face of climate change: (1) letting things be, respecting nature's autonomy, (2) trying to maintain things much as they have been in the past, and (3) promoting the ability of future ecosystems to absorb change and persist without undergoing a fundamental loss of function. Steve Shelly informed us that monitoring of priority species and habitats, coupled with adaptive management, will form the basis for the U.S. Forest Service's management responses, using restoration of whitebark pine and conservation of fens as examples. Wendy Velman emphasized engaging with partners to coordinate across large scales and restoration with native species at local scales. Tom Olliff described coordinated efforts to

monitor and analyze climate change, such as scenario planning in the Crown of the Continent and a whitebark pine vulnerability assessment across the Northern Rockies. Jon Hoekstra summarized how managers from 20 Nature Conservancy preserves were planning to deal with effects of climate change. Many managers aimed to preserve the status quo for biodiversity, while others planned to make ecosystems and species more resilient. A large proportion of the strategies involved continuing to do what was already being done. The afternoon ended with a group discussion about resilience. More information can be found on the MNPS website.

The morning of the second day was spent sharing new information on Natural Heritage Program plant species of concern. Scott Mincemoyer led a discussion on the science and philosophy behind Heritage ranks. That afternoon the Important Plant Areas Committee saw short presentations on two new IPA nominations: South Pryor Mountains and Pine Butte Peatlands. The review committee agreed to postpone voting on designation of the South Pryor Mountains IPA, pending a one-month extension and agency comments. The Pine Butte Peatlands IPA nomination was approved unanimously.

Russian Scientists Revive Ice-Age Flower

[For the complete report, published in the March 6, 2012 issue of the Proceedings of the National Academy of Sciences, go to www.pnas.org.]

A plant frozen in Siberian permafrost for about 30,000 years has been revived by a team of Russian scientists — and borne fruit, to boot.

Using tissue from immature fruits buried in fossil squirrel burrows some 90 feet below the surface, researchers from the Russian Academy of Sciences in Pushchino managed to coax the frozen remains of a *Silene stenophylla* specimen into full flower, producing delicate white blooms and then fruit. The fruits of these ancient plants — a species known commonly as the narrow-leafed campion that still grows in Siberia and northern Japan — were excavated a few years ago from a bank of the lower Kolyma River.

The findings describe what is a record for reviving presumably dead plant tissue — and may provide clues as to what makes some plants hardier and longer-lived than others.

The study was led by Svetlana Yashina of the Russian Academy of Sciences.



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_____

Address_____ City/State/Zip_____

Phone_____ Chapter Affiliation (optional) _____

Delivery preference _____ paper copy by mail _____ digital copy by email

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.

**JOIN OR RENEW ONLINE at
www.mtnativeplants.org**

Membership Level	Dues w/affiliation	Dues w/o affiliation
Individual	\$20	\$15
Family	\$25	\$20
Business/Organization	\$40	\$35
Living Lightly	\$15	\$15
Lifetime (one-time pymt)	\$300 per household	-----

or by mail at
Montana Native Plant Society
P.O. Box 8783
Missoula, MT 59807-8783

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 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 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–December 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

MNPS Board of Directors

President	Dave Hanna	Choteau	466-3661
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Flathead Chapter	Jennifer Hintz	Whitefish	270-7028
Kelsey Chapter	Kathy Lloyd	Helena	449-6586
Maka Flora Chapter	Libby Knotts	Lambert	774-3778
Valley of Flowers Chapter	Joanne Jennings	Bozeman	586-9585
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Small Grants	Linda Lyon	Dillon	683-2878

Moving? Please let us know at mtnativeplantmembership@gmail.com

Montana Native Plant Society

Membership Chair
398 Jeffers Road
Ennis, MT 59729

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FROM: _____
_____(Place native flower label here)_____

Native
Flower
Stamp

TO: Montana Native Plant Society
Electoral College
133 N. Maple
Townsend, MT 59644

Fold Here

Fold Here

OFFICIAL 2012 MNPS ELECTION BALLOT

If you would rather e-mail your ballot to the MNPS Electoral College in Townsend, please log on to the MNPS website at www.mtnativeplants.org and look for the link to 2012 Elections, where there will be a link to the ballot. The Election Committee has received approval for the 10th year from the MNPS Board of Directors to award \$100 to the Chapter with the largest percentage of voters. Please vote for the candidate of your choice, a write-in candidate, or yourself. Please indicate your Chapter affiliation or if you are a Western- or Eastern-at-Large member and not affiliated with a Chapter. All votes cast by June 1 will be compared with the June 1 membership roster for each Chapter. The Chapter that has the largest percentage of voters will receive a \$100 check from the MNPS Treasurer at the Annual Meeting on June 29 - July 1, 2012 at the University of Montana's [Lubrecht Experimental Forest](#) near Greenough, MT. In case of a tie, the prize will be divided accordingly.

CANDIDATE FOR VICE PRESIDENT

☐ KAREN SHELLY
☐ _____
Write-in candidate

CANDIDATE FOR SECRETARY

☐ PATRICK PLANTENBERG
☐ _____
Write-in candidate

CANDIDATE FOR EASTERN REPRESENTATIVE-AT-LARGE

☐ Vacant
☐ _____
Write-in candidate

CHAPTER AFFILIATION

☐ Calypso	☐ Kelsey	☐ Eastern-at-Large
☐ Clark Fork	☐ Maka Flora	☐ Western-at-Large
☐ Flathead	☐ Valley of Flowers	

NUMBER OF PAID MEMBERS IN YOUR HOUSEHOLD _____

THE MNPS ELECTORAL COLLEGE THANKS YOU

MNPS 2012 BUDGET SUMMARY: 3/1/2012

Prepared by: Jenny Tollefson MNPS Treasurer

	<u>Proposed Inc.</u>	<u>Income</u>	<u>Proposed Exp.</u>	<u>Expenses</u>	<u>Proposed Var.</u>	<u>Variance</u>
<u>GENERAL OPERATING EXPENSES</u>						
Membership	\$6,500.00	\$6,249.00	(\$1,000.00)	(\$216.17)	\$5,500.00	\$6,032.83
Newsletter	\$0.00	\$0.00	(\$6,500.00)	(\$1,338.94)	(\$6,500.00)	(\$1,338.94)
Operating Budget	\$400.00	\$140.00	(\$1,165.00)	(\$123.29)	(\$765.00)	\$16.71
Interest Income	\$100.00	\$0.00	\$0.00	\$0.00		
Operating Expenses	\$0.00	\$0.00	(\$15.00)	\$0.00		
Board Expenses	\$0.00	\$0.00	(\$200.00)	\$50.71		
Donations	\$300.00	\$140.00	\$0.00	\$0.00		
Awards	\$0.00	\$0.00	(\$400.00)	\$0.00		
Committees	\$0.00	\$0.00	(\$200.00)	\$0.00		
Publications	\$0.00	\$0.00	\$0.00	\$0.00		
Website	\$0.00	\$0.00	(\$350.00)	(\$174.00)		
GOE TOTALS	\$6,900.00	\$6,389.00	(\$8,665.00)	(\$1,678.40)	(\$1,765.00)	\$4,710.60
<u>SPECIAL PROJECTS</u>						
Projects:	\$2,000.00	\$0.00	(\$17,800.00)	(\$300.00)	(\$15,800.00)	(\$300.00)
Friends of Herbarium	\$0.00	\$0.00	(\$300.00)	(\$300.00)		
Audubon Donation	\$0.00	\$0.00	\$0.00	\$0.00		
Small Grants Fund	\$0.00	\$0.00	(\$3,000.00)	\$0.00		
Chapter Project: open	\$0.00	\$0.00	(\$500.00)	\$0.00		
Chapter Project: open	\$0.00	\$0.00	(\$500.00)	\$0.00		
Flora of Montana Publication	\$1,000.00	\$0.00	(\$11,000.00)	\$0.00		
Flora of Montana Book Purchase	\$1,000.00	\$0.00	(\$2,500.00)	\$0.00		
Plant Conservation Conference:	\$2,000.00	\$1,694.68	(\$2,000.00)	(\$1,330.30)	\$0.00	\$364.38
Annual Meeting:	\$1,050.00	\$0.00	\$0.00	\$0.00	\$1,050.00	\$0.00
Annual Meeting 2011	\$1,000.00	\$0.00	\$0.00	\$0.00		
Merchandise sales from prev. mtgs	\$50.00	\$0.00	\$0.00	\$0.00		
SPECIAL PROJECTS TOTALS	\$5,050.00	\$1,694.68	(\$19,800.00)	(\$1,630.30)	(\$14,750.00)	\$64.38
TOTALS	\$11,950.00	\$8,083.68	(\$28,465.00)	(\$3,308.70)	(\$16,515.00)	\$4,774.98



Montana Native Plant Society

25th Anniversary Annual Meeting

June 29 – July 1, 2012
Lubrecht Experimental Forest

Join us in celebrating the 25th Anniversary of the Montana Native Plant Society in what Meriwether Lewis called the "Prairie of the Knobs", a spectacular glaciated landscape of rolling hills and numerous wetlands now known as the Blackfoot Valley!

SATURDAY FIELD TRIPS – ALL DAY

Tour of the Swan Valley Wetlands. (easy) A trip through the Swan Valley to observe the federally-listed water Howellia as well as several rare fen orchids (including two of Montana's four lady's-slipper species) that occur in Point Pleasant Fen. Bring boots or footwear for wet habitats.

Garnet Mountains and Ghost Town. (easy) Visit 120-year-old Garnet, Montana's best-preserved ghost town (<http://www.garnetghosttown.net/>) and check out numerous wildflowers in Douglas fir and ponderosa pine forest with an open understory. Tour the ghost town for \$3/person (kids under 15 free). Coincides with the annual Garnet Day celebration.

Kleinschmidt Lake South. (somewhat difficult) Hike through a U.S. Fish and Wildlife Service preserve with lots of wildflowers and birds in moist grasslands and sagebrush steppe as well as many types of small wetlands.

Blackfoot Community Conservation Area. (moderate) An 11-mile mountain bike tour of the Blackfoot's community forest near Ovando on forest roads through a potpourri of native forests, grasslands and wetlands, as well as recent restoration projects. Bring your mountain bike and gear.

Bandy Ranch. (somewhat difficult) Hike through rough fescue grasslands and numerous pothole wetlands in rolling country with an excellent diversity of upland and wetland wildflowers and birds.

SATURDAY FIELD TRIPS – HALF DAY

Kleinschmidt Lake North. (moderate) Similar to, but a shorter hike than Kleinschmidt South. Spend time on the shore of Kleinschmidt Lake.

Morrell Ridge. (moderate) A 2-mile round trip hike along the crest of Morrell Ridge from Morrell Lookout to Morrell Mountain with amazing views and passing thru subalpine forests and parks with lots of cushion plants.

Sundance Ranch. (easy) Stroll around the beautiful fields and forests of the Sundance Ranch to view Kleinschmidt Flat prairie in full bloom and an extensive riparian revegetation project.

Ninemile Prairie. (easy) The famous Blackfoot River forms the south boundary of this small but diverse grassland. See grassland wildflower displays and then duck into the cottonwoods to look for riparian species.

SUNDAY FIELD TRIPS – ON THE WAY HOME

Ninemile Prairie. (Going east) See above.

Blackfoot Cliffs. (Going west) Explore cliffs and their wildflowers in lower Blackfoot Canyon.

OPPORTUNITIES FOR CHILDREN

Children are welcome on field trips under parental supervision. Parents can borrow discovery tools for kids' use along field hikes or in camp: binoculars; field microscopes; and, mini naturalist "toolkits". A "Kids in Camp" nature-education activity is also available on Saturday morning – see the next page.

AGENDA

Friday, June 29

- 3:00 – 6:00 Arrive, register, field trip sign-up
- 6:00+ Dinner and festivities at Blackfoot Native Plants Nursery
(map: <http://g.co/maps/apheq>)
- 7:00 Board of Directors meeting at Blackfoot Native Plants Nursery

Saturday, June 30

- 6:30 – 8:00 Breakfast
- 8:00 – 4:30 Field trips (pack a lunch)
- 4:00 – 5:30 Annual Wayne Phillips Plant ID Contest
- 5:30 – 7:00 Dinner
- 7:00 – 8:00 General Membership meeting
- 8:00+ Silent auction, raffle, awards, and slide show

Sunday, June 31

- 7:00 – 8:00 Breakfast
- 8:00 – 9:00 Committee meetings
- 9:00 – 11:00 Break camp, farewells, field trips depart

Adult Registration (Ages 10+. Includes two meals.) Before June 1st	_____ people	x \$30	_____ \$
Adult Registration (Ages 10+. Includes two meals.) After June 1st	_____ people	x \$40	_____ \$
Child Registration (Ages under 10)	_____ kids	x \$0	FREE
Kids in Camp (A half day (morning) of fun, nature-based educational activities will be provided at the Lubrecht site by adult naturalist educators.) Not available after June 10th	_____ kids		
	_____ ages	x \$0	FREE
Saturday Dinner Not available after June 10th	_____ people	x \$18	_____ \$
Saturday Child Dinner (Ages under 10) Not available after June 10th	_____ kids	x \$9	_____ \$
Sunday Breakfast Not available after June 10th	_____ people	x \$10	_____ \$
Sunday Child Breakfast (Ages under 10) Not available after June 10th	_____ people	x \$5	_____ \$
Lodge Accommodation (16 rooms only, double occupancy, shared bathrooms)	_____ NIGHTS	x \$80	_____ \$
Cabin Accommodation (Cabins sleep 1 – 4 people, use of bath house, 2 nights)	_____ people	x \$30	_____ \$
Boxcar Accommodation (Boxcars sleep 1 – 6 people, use of bath house, 2 nights)	_____ people	x \$30	_____ \$
Tent Camping (Use of bathhouse, 2 nights, parking is separate from campsites)	_____ people	x \$20	_____ \$
R.V. Camping (No hookups, use of bathhouse, 2 nights)	_____ people	x \$20	_____ \$
		TOTAL	_____ \$

Name(s): _____

Address: _____ **City:** _____ **State:** _____ **Zip:** _____

Phone: _____ **E-mail:** _____

I (we) hereby indemnify and hold harmless the Montana Native Plant Society (MNPS) and its board of directors and members against claims of liability, damages, and injury that may arise out of my (our) participation in MNPS activities at Lubrecht Experimental Forest and related field trips, June 29-July 1, 2012. **Signature(s):** _____

Make checks payable to MNPS. Send this part of the registration form and payment to: MNPS c/o Kathy Knudsen, 13751 Bunchgrass, Missoula, MT 59808

Register and pay online at: www.mtnativeplants.org

Lubrecht Experimental Forest: Lubrecht Experimental Forest (LEF) is primarily managed by the University of Montana and is used for

education and research in forestry and related disciplines. For more LEF info, please visit: www.cfc.umt.edu/lubrecht/default.htm.

Lodging at Lubrecht: Three types of accommodations are available on a first-come first-served basis during the meeting: tent or R.V. camping; dormitory-style cabins and boxcars; and, hotel-like double-occupancy rooms in the lodge. Lodge rooms have two twin beds (linens provided), are climate controlled and share bathrooms. Dormitory-style accommodations are available in the several cabins and boxcars. Those staying in a cabin or boxcar will need to bring their own linens and will share use of the bathhouse. Campers will also share the bathhouse.

Getting to Lubrecht: The entrance to LEF is at mile marker 22.5 on Hwy 200 and it will take ~40 minutes to drive to LEF from Missoula. **From Missoula** Take I-90 to Hwy 200. Proceed on Hwy 200 through Bonner to just past the Garnet Range Rd. and the 22-mile marker. **From Bigfork** take Swan Valley Hwy (83) south to Hwy 200. Go west on Hwy 200 to just past the 23-mile marker. **From Helena** take Hwy 12 west to Avon. Take Hwy 141 north to Hwy 200. Take Hwy 200 west to just past the 23-mile marker. **From Butte** Take I-90 west to Garrison. Take Hwy 12 east to Avon. Take Hwy 141 north to Hwy 200. Take Hwy 200 west to just past the 23-mile marker.

Meals: Meals will be provided by both LEF and the Clark Fork Chapter of MNPS. Friday: After registering at LEF, join us at Blackfoot Native Plants Nursery (map: <http://g.co/maps/apheq>) for a pot luck dinner and festivities – hosted by the Clark Fork Chapter and Kathy & Michael Settevendemie. Saturday: continental breakfast in camp provided by the Clark Fork chapter; lunch on your own; and dinner (meat or veggie lasagna and fixings) by LEF staff in camp. Sunday: hot breakfast by LEF staff in camp.

Field Trips: Sign-up for field trips will begin during registration on Friday. Since the number of people on each field trip is limited, plan to sign up as early as possible and have a few options in mind. Bring your own food, water and personal gear for your field trip(s). Take some great photos for the Saturday slide show in camp!

Estimated Mileage to Lubrecht from

Bozeman: 210
Great Falls: 138
Kalispell: 115
Missoula: 35
Sidney: 600