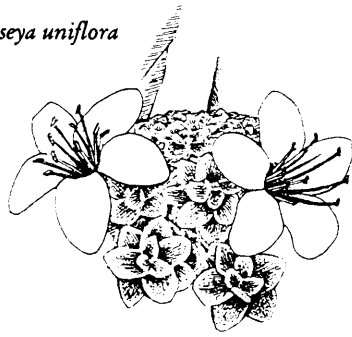




Kelseya

NEWSLETTER of the MONTANA NATIVE PLANT SOCIETY

REMEMBERING MONTANA'S BOTANICAL HISTORY

Landscaping at Lewis and Clark Center nears completion

by Wayne Phillips

In May 1998 the Lewis and Clark National Historic Trail Interpretive Center opens along the Missouri River near Giant Springs in Great Falls, Montana. Native plant landscaping of the Center grounds is planned for completion a few weeks before this opening. Most of the plants used in this landscaping were grown from seed collected at the construction site. Many of the plants used in this landscaping are the same species collected and described by Meriwether Lewis during the 1804-06 expedition.

These actions culminate ten years of planning and fund raising for this Center, which began when Congress authorized the construction of the 27,000-square-foot building and associated site developments. The environmental assessment for the Center included the statement, "The loss of some native vegetation species (from development) can be partially mitigated by collecting native seed from the project area for use in site landscaping..."

In the fall of 1995 funding for the Center was secured. A landscape plan was developed by Lewis and Clark National Forest landscape architect Ron Yates and

Ecologist Wayne Phillips. This plan used native plants as a design element to implement the mitigation objective above, because native plants were believed to be, 1) of more value for historical interpretation, 2) adapted to the site, reducing long-term maintenance costs, and 3) more attractive, blending better with the adjacent site.

Seed collection began in earnest in the fall of 1995. Forest Service employees and local volunteers from the Montana Native Plant Society collected local native seed from ten shrubs, 18 wildflowers and five grass species at and near the proposed construction site. This seed was sent to the Forest Service nursery at Coeur d'Alene, Idaho to be germinated and grown in containers for transplanting at the Interpretive Center in the spring of 1998.

The Coeur d'Alene Nursery was successful in germinating most of the native seed collected from the construction site. Over 3000 containers of plants of 28 native species were grown from the locally collected native seed. In some species, the plants produced from the seed were unsuccessful, or were below the number called for in the revised landscape plan. To supplement the landscape plan needs, 990 plants of six species of native

continued on p. 10

Native Species Planted at Lewis and Clark Interpretive Center

SHRUBS

serviceberry, mockorange, chokecherry, golden currant, buffaloberry, silver sagebrush, rubber rabbitbrush, prickly pear, skunkbrush sumac, woods rose, western snowberry, narrowleaf yucca

WILDFLOWERS

yarrow, two-grooved milkvetch, Drummond's milkvetch, time-leaved milkvetch, wavy-leaved thistle, white prairie clover, purple prairie clover, Indian blanket, wild licorice, Hymenoxys, dotted gayfeather, Lewis' blue flax, shining penstemon, white beardtongue, prairie coneflower, bitterroot, pale purple coneflower.

GRASSES

western wheatgrass, red threeawn, blue grama, Indian ricegrass, needle-and-thread grass

Centennial of Rydberg's and Bessey's Exploration

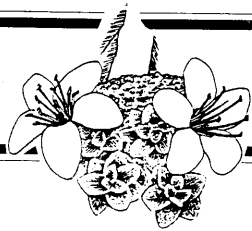
by Judy McCarthy

In August of 1997, while sorting through some recently collected plants from the Spanish Basin, Gallatin County, Montana, I had occasion to reference *Oxytropis besseyi* in the Montana State University herbarium (MONT). The mounted specimen I examined was one of the newly-named stemless locoweeds collected by Rydberg and Bessey in the Spanish Basin, and was named on the spot, perhaps, for Bessey by Rydberg.* This sheet reads, "Collected in the Spanish Basin, Gallatin County, Montana - part of the collections of the "Exploration of the Yellowstone and Montana, 1897." This aroused my curiosity. What was Per Axel Rydberg, an Easterner (actually, a Swede) doing in Montana in 1897?

Apparently, in 1897, Mr. Wm. E. Dodge of New York City, financed this Exploration to Yellowstone and Montana as the first of the New York Botanical Garden's field pursuits. Per Axel Rydberg was selected to lead, and he chose Ernst Bessey of the University of Nebraska to accompany him. Expenses for the trip were \$672.14, and supported the men in the field from June until September, 1897. They based in Bozeman and collected plant specimens as they traveled first to the Bridger Mountains, Spanish Basin, the Madison River Valley, Yellowstone Park, and then returned by way of the Yellowstone River Valley to Trail Creek Pass back to Bozeman.

Rydberg and Bessey collected 800 different species and 20,000 specimens

continued on page 10



FROM THE PRESIDENT

WAYNE PHILLIPS

Native Plant Source Guide

The new edition of "Source Guide for Native Plants of Montana" is still available, but going like hotcakes, according to Linda Iverson. To order your copy just send \$6 (MNPS members) or \$8 (non-members) to Linda at HC 88 Box 3733, Big Timber, MT 59011.

Clayton Berg of Helena recently sent a note to the editors of the "Source Guide" expressing his concern about the origin of native species plant material listed in the guide. His point is that plants of a "native species" that originated in a climate far different from where you intend to plant them may be no more adapted locally than "exotic species." In addition, planting of native species from a non-local seed source runs the additional risk of "polluting" the local gene pool, thus reducing the fitness of local populations of that species. For example, Montana's state grass, bluebunch wheatgrass, occurs from Montana south to west Texas. Bluebunch wheatgrass seed collected in west Texas is probably genetically different from Montana plants, and not well adapted to conditions in western Montana.

For small native plant gardens around your house, this is much less of a problem than it is with large rehabilitation projects. If you have a concern about the origin of the seed of the nativespecies you are buying, ask the grower/seller where the original seed came from. If you wish to grow native species from localsources, please follow the MNPS guidelines for growing them from seed, rather than transplanting them from the wild.

Wildcrafting of Native Herbs

"When Paul Buck knelt down to examine fresh diggings last summer in a native tallgrass prairie (in Oklahoma) he couldn't believe the damage done. Just a few days before, the field had been carpeted with one of the prairie's most beautiful wildflowers, the ...purple coneflower. But now the flowers' subtle pinks and pale lavenders were missing, with deep gashes and mounds of raw earth marking where the plants once stood. (Medicinal plant)gatherers had taken every plant out of a field of at least 40acres. There wasn't a single one left...". (from Gary Lantz forNational Wildlife Magazine).

Coneflower (*Echinacea*) is the top selling herbal product in the U.S. with sales of about \$80 million annually. Purple coneflower (*E. purpurea*) is grown commercially, but most other *Echinacea* species are dug from wild populations, or "wildcrafted". The herb industry is paying as much as \$21 a pound for wildcrafted *Echinacea* roots (from Gary Lantz).

The genus *Echinacea* is unique to North America, with nine species represented. Two rare species of *Echinacea* in the southeast U.S. are listed as "endangered" by the U. S. Fish and Wildlife Service.

In Montana, narrow-leaved purple coneflower (*E. angustifolia*) occurs in the western, south-central and eastern parts of the state according to Robert Dorn, but is probably most abundant in the southeastern corner. There have been several reports of herb companies advertising to purchase wildcrafted *Echinacea* roots in Montana.

I believe that the commercial wildcrafting of native species, like

Echinacea, poses a serious threat to our native flora. In my view, herbs for the herb market should be grown commercially, which is easy to do in the case of *Echinacea*. Unfortunately, some herbalists have perpetuated the belief that wildcrafted herbs are "better."

Personally, I have decided to boycott wildcrafted herbs and to urge commercial herbalists to obtain their plants strictly from commercial growers. What is your opinion on this? Should the Montana Native Plant Society develop a policy in this regard?

Spring!

On March 14, I traveled from Raynolds Pass to Great Falls on a beautiful sunny day. I couldn't resist the urge to stop from time to time to search high energy slopes for my first wildflower of the year. I found skunkbush sumac buds swollen and ready to burst, but no flowers. Then, noticing the catkins of alder along Little Prickly Pear Creek, I stopped at Canyon Creek to investigate. When I thumped a male catkin there was a spray of yellow pollen. Yes, it is spring!

I have been keeping a record of the date of the first wildflowers along the Rivers Edge Trail here in Great Falls. I'll bet manyof you have a similar habit. When did you see your first wildflower this spring? What was it? If you will send me your earliest 1998 flower observations (species and date) I will summarize the results for the summer meeting and in the next Kelseya. Happy hunting! See you at Seeley Lake on July 10.



Wayne can be reached at 2601 Third Ave. North, Great Falls, MT 59401 e-mail: hwayne@mcn.net

Fungus Flowers Fool Botanist

by Peter Lesica

Buttercups are usually the first flowers on the grassy hills around Missoula. They rarely occur on the stony ridgetops, but prefer the deeper soil of the slopes and flats. Often at this time of year my eye will fall on a yellow spot of color among the green foliage, and I'll bend over to see what it is, only to find that it's not a flower at all. It's the right size for a buttercup, but it looks like a cluster of light yellow leaves covered with small crystalline pustules.

This plant is our common rockcress (*Arabis holboellii*) in the Mustard Family. Rockcress usually produces long stems with numerous white flowers later in the spring. But this plant is infected with a rust fungus in the genus *Puccinia*. Infection of Rockcress occurs in the fall, and the fungus grows in the host plant during the fall and winter, altering the buds that produce next year's growth. In the spring, the

plant is stunted with numerous short leaves instead of a normal, tall flower stem. Near the tip of the stunted stem the leaves are clustered and yellow with the reproductive structures of the fungus. A sugary nectar and even a mild scent is produced by the fungus at the same time. These yellow clusters of leaves that produce nectar are called pseudoflowers. Flies and sometimes even bees are attracted to these pseudoflowers, and these insects are required for sexual reproduction between different strains of the rust fungus occurring in the same area. Pseudoflowers serve the same function for the fungus

as real flowers perform for plants; they affect mating. But since the fungus can't produce flowers of its own, it resorts to forcing its host to do the job for it. But that's only part of the story.

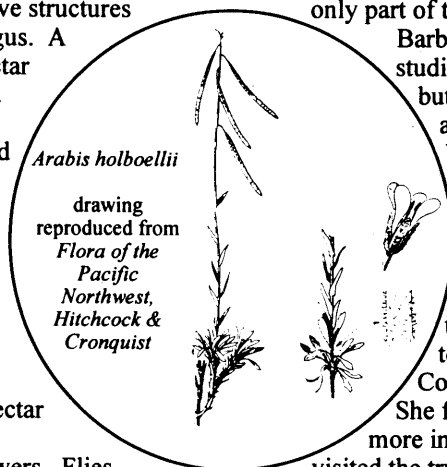
Barbara Roy studied buttercups and the buttercup-like pseudoflowers of rockcress where they occur together in Colorado. She found that more insects

visited the true buttercups when they were with rockcress pseudoflowers than when they were with other buttercups. And more insects visited the fungally-produced pseudoflowers when they were with buttercups. Each receives more insect visits when in the

company of the other than by themselves. Roy found that buttercups produce a large pollen reward for visiting insects but have little nectar. On the other hand, the fungal pseudoflowers produce no pollen, but have copious nectar. Apparently the pollen and nectar rewards together are more attractive than either alone. The more visiting insects, the more likely is successful mating for both buttercups and fungus. In this unlikely way the buttercup and fungus help each other produce more offspring.

Nature sometimes makes strange bedfellows. The fungus can infect the hapless rockcress and fool the insects, but it won't fool me again... at least not until next year.

Additional reading: Roy, B. A. 1994. The effects of pathogen-induced pseudoflowers and buttercups on each other's insect visitation. *Ecology* 75:352-358.



Plant Conservation Center preserves America's rare plants

The Center for Plant Conservation (CPC) received an award of \$20,000 from the Forrest C. Lattner Foundation to provide \$5,000 sponsorships for four endangered plants housed at two Florida botanical gardens. This gift will be used to challenge the Bok Tower Gardens in Lake Wales and Fairchild Tropical Garden in Miami to raise \$5,000 per plant in matching funds to sponsor four plants in CPC's National Collection of Endangered Plants, a living collection of over 500 of the nation's rarest plants.

"I am truly grateful that the Forrest C. Lattner Foundation has given CPC the opportunity to significantly improve the conservation security of four of Florida's rarest plants. This

will enable us to build upon the plant conservation successes that we have achieved thus far in this priority conservation region," said Dr. Brien A. Meilleur, CPC President and Executive Director.

CPC also received an award of \$8,000 from The Bay Foundation for the creation of an educational guide to the rare plants of the United States. This booklet will highlight stories from within CPC's National Collection of Endangered Plants, with one plant profiled from each state. The educational guide will emphasize our reliance on native plants, their place in our natural heritage, and what can be done to protect them.

The CPC National Collection of Endangered Plants is

maintained through the generous support of individuals, foundations, corporations and other organizations who sponsor individual plant species. Sponsorships occur through restricted donations to CPC that specify the plant that the donor wishes to 'adopt.' A portion of the income derived from this plant sponsorship fund is transferred each year to the CPC gardens to support seed collection, seed storage, and horticultural research to help ensure the long term survival of the sponsored plant.

The Center for Plant Conservation is the only national organization in the United States dedicated exclusively to the conservation of U.S. native plants. It is located in St. Louis, Missouri.

Want more information on the Center for Plant Conservation?

They can be contacted by writing to:
Missouri Botanical Garden
P.O. Box 299
St. Louis, MO
63166-0299
Phone: 314/577-9450
Fax: 314/577-9465
Homepage: [http:// www.mobot.org.CPC](http://www.mobot.org.CPC)

THINK



The true *Carex rostrata* in the American Rockies

It's very disappointing to many botanists when they find out that what they know as *Carex rostrata*, one of the commonest species of wetland *Carex* in many areas of North America, is actually not that species, but rather is *C. utriculata*. Even more annoying still is that this is not just a simple name change. There really is a *C. rostrata*, a rare circumboreal plant. Now they have to separate the two!

On the other hand, the genuine *C. rostrata* is a rarity of fens, and so it affords excellent opportunities for botanizing in a rare and very interesting habitat. And its distribution in the American West is still poorly known, so there is also a good opportunity to contribute to our knowledge base of this plant.

In fact, *Carex rostrata* and *C. utriculata* are relatively easily distinguished in the field and in the herbarium, but the differences are mostly found in the leaves. This fact probably partly accounts for the lack of recognition of *C. rostrata* in North America until recently - after all, species of *Carex* are supposed to differ in their perigynia. Not so with this pair. In fact, descriptions of the two are very similar, except that *C. rostrata* tends to be a smaller and more slender plant.

What are the differences? Most obvious in the field is that the leaves of the common *C. utriculata* are yellow-green to dark olive-green; but *C. rostrata* has quite striking, glaucous (blue-green) leaves due to a heavy wax layer on the epidermis.

Then the leaf shape in cross section is quite different. In *C. utriculata* the leaves are folded, with a prominent midvein formed into a keel. In *C. rostrata* the leaves are U-shaped, without a prominent midvein, and they lack a keel.

Carex utriculata has the typical arrangement of stomata for most broad-leaved sedges - in lines on the underside (abaxial surface) of the leaf. In *C. rostrata* the stomata are on the upper (adaxial) surface (very rarely some are also on the underside).

Finally, the upper surface of the

leaves of *C. utriculata* is smooth except for a scattering of small prickly hairs. In *C. rostrata* the upper surface of the leaves is densely covered with small papillae. This is a difference that can readily be seen with a good dissecting microscope.

Other small differences are that the culms (stems) of *C. rostrata* are essentially round, or at most bluntly triangular, and smooth. The culms of *C. utriculata* are clearly triangular and scabrous-angled.

Very rarely, specimens appear intermediate. These are sterile and are presumably rare hybrids. Such hybrids are well known from Europe.

The habitats of these two species are also rather different; or at least the habitats of *Carex rostrata* are only a small subset of those of *C. utriculata*, which is common in a wide range of wetland types: bogs, fens, sedge meadows, including ones associated with river and lake shores, spring heads and seeps, and even roadside ditches. The habitats are often firmly grounded, and rarely under water. *Carex rostrata*, on the other hand, is more or less restricted to quaking or floating fen mats, and it often occurs in shallow water. Sedge associates of *C. rostrata* in the west are species like *C. lasiocarpa*, *C. limosa*, and much more rarely, *C. livida* and *C. chordorrhiza*. A typical non-sedge associate is *Menyanthes trifoliata*, the bogbean.

One other point is that *C. rostrata*, at least partly due to its restricted habitat, is a much rarer plant than *C. utriculata*. It's probably safe to bet that there are a couple of hundred stations of *C. utriculata* for every *C. rostrata* in most parts of its North American range.

The ranges of the two are rather different. The western U.S. is on the very outlying fringe of the range for *C. rostrata*.

(MNPS member Bonnie Heidel, of the Montana Natural Heritage Program, reports that *Carex rostrata* is now known from two collections in Montana, at fen sites in Missoula and Flathead counties.)

by A.A. Reznicek, Curator,
University of Michigan Herbarium

*Carex
utriculata*

Beaked
sedge

Key to 3 *Carex* Species

1. Leaves strongly papillose on upper surface, U-shaped in cross-section, glaucous; widest leaves 1.5-4.5 (7.5) mm wide; stems round or very obtusely triangular, smooth below inflorescence; with long creeping rhizomes.....*C. rostrata*
1. Leaves smooth or glabrous on upper surface, flat or folded, pale to dark green, widest leaves 3-12 (15) mm wide; stems triangular, scabrous below the inflorescence.
2. Colonial from long, creeping rhizomes; widest leaves (4.5) 5-12 (15) mm wide; ligules about as long as wide; basal sheaths usually spongy-thickened and only slightly or not at all red-tinged.....*C. utriculata*
2. Caespitose; widest leaves 1.8-6.5 mm wide; ligules longer than wide; basal sheaths not spongy-thickened and often strongly tinged reddish-purple.....*C. vesicaria*

Habitat Protection for *Howellia aquatilis*

by Shannon Kimball

Members of the Flathead Chapter joined forces with several groups this summer to protect Water Howellia (*Howellia aquatilis*) habitat in the Swan Valley. Water Howellia, listed in Montana as "threatened" by the U.S. Fish and Wildlife Service, occurs in shallow ponds of the Swan Valley.

Many of these ponds lie on Forest Service land, and are

protected through a federal conservation strategy. However, ponds located on privately owned land do not receive federal protection, and several are in poor ecological condition. With the help of Forest Service know-how and monetary support of Mary Gray's Water Howellia Chocolate fund, we hope to give privately owned ponds the protection they need.

As most of you know, Mary Gray, a Clark Fork Chapter member, has substantially contributed to a special fund for Water Howellia. Monies from the sale of her Water Howellia Chocolates have been graciously donated to the Montana Native Plant Society to aid the species recovery.

The primary threat to Water Howellia survival is habitat modification. Because of this species' specialized habitat requirements (see Steve Shelly's article in Winter 1995 Kelseya, Vol. 8 No. 2), subtle changes in hydrology and floristic composition can severely impact Water Howellia populations. Cattle use of the ponds may also pose a threat to this species by altering its environment. Although grazing pressure is minimal in the Swan Valley, a number of Water Howellia ponds are being regularly

used by cattle. We don't have information that proves cattle have detrimentally altered these ponds, however, after studying several Water Howellia ponds in northern California, Dr. Niall McCarten from UC Berkeley has suggested prolonged cattle use may alter water chemistry and productivity in ponds, subsequently harming Water

The Forest Service team, led by Flathead National Forest botanist Maria Mantas, and Jerry Hess, provided much needed expertise and equipment to the project. The Flathead Chapter provided crucial man (and woman) power, while Mary Gray and several friends, including U of Montana students, helped tremendously on our workdays. Mary

also generously supplied lunch for all the work crews.

After three workdays we were able to complete our protection project on one pond. Building a jack-leg fence is much harder then it looks!

Howellia populations.

The Flathead National Forest has recently initiated a project to protect Water Howellia from cattle intrusion. "Jack-leg" fences have been constructed around ponds where these plants occur, thereby excluding cattle. In cases where a pond is surrounded by relatively dense vegetation, brush has been positioned in places where cattle have broken through in the past, blocking their entry.

The Flathead Chapter decided last spring to carry Forest Service conservation efforts one step further by initiating a similar project on privately owned ponds containing Water Howellia. Two ponds were identified, both with significant cattle use. They straddle the border between National Forest and lands held by Plum Creek Timber Company. This situation presented an opportunity for the Flathead Chapter to work together with Forest Service personnel building the fence and "brushing in" the forested borders of these ponds.

After three workdays we were able to complete our protection project on one pond. Building a jack-leg fence is much harder then it looks!

This spring we plan to continue our habitat protection activities, finishing at least one more pond. An ongoing part of this project has been contacting landowners with Water Howellia populations, visiting their ponds, and assessing whether any action is needed. If more ponds with cattle disturbance are discovered, we will organize workdays to ensure the habitat is not further compromised. Many thanks to those who donated their valuable time to this project.

Order your Water Howellia Chocolates today!

And help conserve Montana's first listed Threatened plant!

Made from the finest Belgium Chocolate (Callebaut), to satisfy the most discriminating taste.

Brought to you from Nature's Web Division, Missoula

**To Order Call
(406)549-0832**

courtesy of Aunty Shrew



* CHAPTER LIFE *

♦ CLARK FORK CHAPTER

The last day of January seems like an unlikely day for a native plant field trip, but not if you're after lichens and mosses. Following earlier herbarium sessions, Andrea Pip and Joe Elliott led about ten hikers, including two all the way from Helena, into Hellgate Canyon east of Missoula. The steep canyon slopes were free from snow in many places, and it was here and on the argillite cliffs that we found what we were looking for. We identified 16 species of lichens, including two species each of pelt lichens (*Peltigera*), rosette lichens (*Physcia*), rockbrights (*Rhizoplaca*) and the beautiful orange lichens (*Xanthoria*). We did nearly as well on mosses, finding about ten species. Perhaps most exciting were the electric shock moss (*Rhytidiadelphus triquetrus*) under the trees and *Encalyptia raptocarpa* with luscious green sporophytes in cracks in the large rock slabs.

Now there's something to do in winter too!

submitted by Pete Lesica

♦ FLATHEAD CHAPTER

Work is rolling along on the illustrated manual of vascular plants for Glacier National Park. Debbie McNeil is working on illustrations and Pete Lesica is currently conducting herbarium research and writing the text. The completed manuscript will be sent to the University of Utah Press in June 1999, and the finished book should be available in the summer, 2000. Nineteen volunteers from the Flathead

Chapter have spent 165 hours mounting 704 specimens needed for completion of the herbarium research. Many thanks to all of you! The manual is funded by the National Park Foundation, the National Fish and Wildlife Foundation, Glacier National Park Associates and *your* Montana native Plant Society.

submitted by Robyn Klein

♦ KELSEY CHAPTER

Just as with trees and other components of the natural world, each year the Kelsey chapter adds a pattern of growth and development to the composite that makes us who we are. Our growth ring in 1997 was strong and well defined. Our membership continues to increase at a steady pace, and the chapter undertook a major project with development of the Mt. Helena reference set for the Lewis and Clark Library. Alliances with other groups that share our interests have broadened our outreach efforts and will continue this year with many outings and events. Chapter programs have been well attended and the hikes and field trips during spring, summer and fall introduced many new faces to the goals of the Montana Native Plant Society. *The Independent Record* Wildflower Series was a success in 1997, and will continue this year to educate the reading public while introducing them to the broader concepts of native plant appreciation and conservation. How we will measure our accomplishments at the completion of 1998 is, to a large degree, up to each of us.

*submitted by Kathy Lloyd
from the Kelsey Chapter News*

We'd like to hear from you!

The Montana Native Plant Society now has nine chapters across our great state. From Westby to Whitefish, Billings to Butte, we'd like to hear about your activities in each issue of *Kelseya* right here in Chapter Life. Send your written reports to

Montana Native Plant Society,
Dennis Nicholls, Kelseya Editor,
P.O. Box 1632,
Noxon, MT 59853.

It's a big state. Let's share our adventures.

NOW AVAILABLE!!

From the Landscape & Revegetation Committee
Second Edition of the

"Source Guide for Native Plants of Montana"

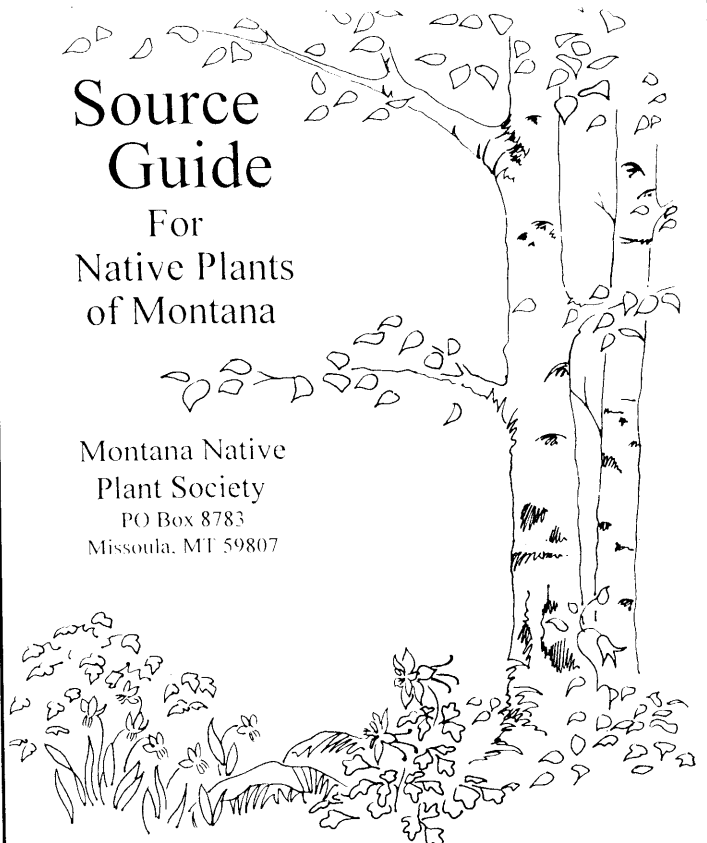
Contains detailed list of where to get bareroot and containerized plants and seeds for 583 species of trees, shrubs, forbs, ferns, grasses, sedges and rushes.

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Send check to MNPS Source Guide, c/o Linda Iverson, HC 88 Box 3733, Big Timber, MT 59011

Source Guide For Native Plants of Montana

Montana Native
Plant Society
PO Box 8783
Missoula, MT 59807





CALENDAR



♦ CLARK FORK CHAPTER

~ Thursday, March 12, 7:30 pm. Rm 131, Science Complex, UM Campus. Joe Elliott, raconteur, bon vivant and botanist will entertain and instruct with a presentation on "African Alpine Plant Ecology: Weird Plants of Mt Kenya and Mt. Kilimanjaro."

~ Tuesday, March 31, Herbarium Night. 7:30 pm. Rm 303, Botany Bldg, UM Campus. What's so great about *Astragalus*? It's Montana's second largest plant genus, that's what. Come learn about our locoweeds and milkvetches with Peter Lesica. Bring your hand lens and copy of Dorn if you have them.

~ Thursday, April 9, 7:30 pm. Rm 131, Science Complex, UM Campus. John Pierce, the Jaques Cousteau of the North, will present a program, "Beneath Kootenai Waters: Aquatic Plants of Kootenai National Forest."

~ Thursday, May 14, 6:30 pm. It's our annual Spring Potluck! Bring some food to share, a plate and utensils to the home of Chinwon and Howard Reinhardt at 6330 Woods Road, just after the Recreation Area turn. We'll get a tour of their wonderful garden. For more information call Chinwon (543-4029).

~ Thursday, June 18, Clark Fork Prairie Weed Pull. Come help John Pierce beautify his prairie restoration. Meet in the parking lot at the east end of Fourth Street at 6:30 or thereafter. For information call John (542-2640).

♦ FLATHEAD CHAPTER

*"Living in the Landscape"
A Flathead Celebration*

This summer many events are being planned to celebrate the natural, social and economic landscape of the Flathead Valley. The Flathead Chapter is sponsoring several family-oriented walks to learn about plants that grow in our various communities. Everyone is welcome to join us. Call the leader for additional information.

~ Wednesday, May 27, 7 pm Low elevation forest habitat near Whitefish. Meet at Tally Lake Ranger Station. Mary Sloan, 862-3360.

~ Tuesday, June 2, 7 pm Lawrence Park, Kalispell. Meet at the end of the road parking area. Kathy Ake, 755-7693.

~ Wednesday, June 3, 7 pm Columbia Mountain, Columbia Falls. Meet at trailhead near the west end of Bad Rock Canyon. Leader Rachel Potter.

~ Saturday, June 6, 10:00am, Sprunger-Whitney Nature Trail, Swan Valley. A 2-mile hike on an interpretive trail on Montana School Trust lands. Meet at trailhead at Point Pleasant campground, 9 miles south of Swan Lake. Anne Morley, 886-2242.

~ Wednesday, June 10, 7 pm, Swan River Road, Bigfork, 2 miles round trip through 3 distinct habitats. Walk will focus on how plants are used. Meet at gate at end of Grand Ave (200 yards from downtown Bigfork). Mike Gaul, 837-1057.

~ Wednesday, June 17, 7 pm Moist forest habitat of West Glacier. Meet at the West Glacier Post Office. Terry Divoky, 387-5527.

~ Saturday, June 20, 10 am Wetland and forest habitat of

Swan Valley. You'll see a variety of orchids and other wetland and riparian plants on this walk on private land. Meet at Swan Valley Community Center in Condon. Kaye Owen, 752-8089.

~ Wednesday, June 24, 7 pm Subalpine habitat of Jewel Basin, near Bigfork. Meet at Jewel Basin trailhead off Echo Lake road. Pattie Brown, 837-5018.

~ Saturday, June 27, 10 am Old growth forest habitat of the Middle Fork, Skiumah Creek Trail. Approx. 2 miles round trip. Meet at trailhead just east of Nyack Flats. Mary Sloan, 862-3360.

Look for other summer hikes with the Flathead Chapter in the Field Trips Flyer coming out soon.

♦ KELSEY CHAPTER

~ Monday, April 13, 7 pm Larry Evans of the Western Montana Mycological Assoc. will present a slide show and discussion entitled "*Montana Mushrooms Mania*." At the Lewis and Clark Library.

~ Sunday, April 26, we will team up with Keith Leatherman of the Helena Ranger District to continue our revegetation work at White's Gulch. Call Keith at 443-1920 or Kathy at 449-6586 for the details.

~ Saturday & Sunday, May 16-17, we will begin work at the Girl Scout Camp on the Rocky Mountain Front 18 miles west of Augusta. We are doing a preliminary plant survey on about 10 acres that will be set aside as a nature preserve. We'll also teach plant ID skills to a select group of older girl scouts. This project is being

conducted as part of a trade for use of Camp Thunderbird for the 1999 annual meeting. Call Kathy for details, 449-6586.

~ Saturday, May 23, Michael Lee will lead a trip to Crown Butte jointly sponsored by the Montana Wilderness Assoc. and the Kelsey Chapter. John Koerth will be present to answer questions on grasses. Call Michael at 443-1126 to register.

~ Friday, May 29, 7 pm "*Celebrate Mount Helena*" at Lewis and Clark Library. Presented by the Kelsey Chapter, Last Chance Audubon, Falcon Press and City of Helena Parks Department. From geology to plants to birds to ticks and deer, join us for an evening celebration.

~ Saturday, May 30, "*Celebrate Mount Helena*" field trips. Call Kathy for details, 449-6586.

~ Sunday, June 7, 8:30 am Jean Smith from Last Chance Audubon will lead a hike into Skelly Gulch. This BLM property is being considered for protection and a nature trail might be developed. Meet in the NW corner of the Lundy Center parking lot to carpool to the site. Call Kathy.

~ Saturday, June 20, Jack Taylor, Professor Emeritus from MSU will help us identify grasses and grassland communities. Call Jack at 442-9667 to register.

~ June 28-July 4, we'll go out to the Girl Scout Camp again sometime during this week to continue the preliminary plant survey.

CALENDAR EVENTS ARE
CONTINUED ON THE
NEXT PAGE.

CALENDAR EVENTS con't.

♦ VALLEY OF THE FLOWERS CHAPTER

~ Saturday, June 13, 9 am
Join Joe Gutkoski for a day of walking this spectacular deep river canyon and helping us attack a serious infestation of knapweed. The trail is a scenic route along The Madison River, which is dotted with boulders, pools, cataracts and riffles. We will discuss noxious weeds and explain how to pull the plants at their bud stage. Wear sturdy footgear and bring work gloves, lunch and rain jacket. Rattlesnakes are found in the canyon; the leader will give an orientation on their behavior and how to minimize encounters with them. Meet at Osco Shopping Center in Bozeman to carpool to the trailhead. Call Joe at 587-3242 for details. Co-sponsored with Montana Wilderness Assoc., BLM and Madison County Weed Control District.

~ Monday, June 15, 4:30 pm
With picnic dinners in day packs, we'll take a gentle evening walk into the last unlogged canyon on the Gallatin Face. Bring a rake or shovel and work gloves so some light trail maintenance and weed pulling can be accomplished. Leader Doug Rand has first-hand knowledge of the successful citizen campaign to protect this place from road building and logging. Meet at South Cottonwood trailhead. Take US 191 1.5 miles south of Bozeman, turn south on

Cottonwood Road and drive 7 miles to Cottonwood Canyon Road; turn south and go to the end. Call Doug for details, 587-8252 days or 763-4394 evenings. Co-sponsored with MWA and Concerned Citizens for South Cottonwood, Inc.

♦ WESTERN MONTANA AT LARGE MEMBERS

~ Sunday, April 19, 1:30 pm
Join us at the Mt. Silcox Wildlife Management Area about 2 miles east of Thompson Falls on Hwy 200. We'll search for early spring wildflowers in this Ponderosa pine and grassland habitat. Call Dennis for details, 847-2040.

~ Saturday, May 16, 9 am
Take an adventurous hike to the summit of 20 Peak, near Trout Creek, for a spectacular view of the Cabinets and the lower Clark Fork valley. An all day hike, moderately difficult, 8 miles round trip. Bring lunch, rain gear and water. Brushfields to subalpine - we'll see it all. Call Dennis for details and where to meet, 847-2040.

~ Saturday, June 27, 9 am
We'll hike into Devil's Club Creek on the edge of the Cabinet Mountains Wilderness to discover how the forest is recovering from the extensive fires of 1994. Meet at the Historic Bull Ranger Station 2 miles off Hwy 56 north of Noxon. Co-sponsored with the Bull River Outdoor Education Committee. Call Debby Boots for details, 847-2602.

Conservation Bullets

from Peter Lesica

The 1996 Federal Farm Bill continued the Conservation Reserve Program (CRP). In Montana ca. 2,383,000 acres of marginal cropland, an area more than twice as large as Glacier National Park, was enrolled in the program. The Natural Resources and Conservation Service stated that this round of CRP had more benefits to wildlife and ca. 50% fewer crested wheatgrass monocultures (see *Kelsey* Vol.9 No.3). Nonetheless, only about 10% of the plantings were with native species, the rest were exotics. Emergency haying was allowed on much of the land in 1997, a practice that limits the benefits to wildlife.

Although farmers cannot enroll land in CRP unless it has been farmed in two of the past five years, this is not likely to significantly curtail the loss of native prairie associated with CRP in Montana (see *Kelsey* Vol.8 No.3).

Undoubtedly some landowners will see their native prairie as a future source of federal payments if they break and farm it now.

Native Prairie...



... a Heritage we should Cherish.

Northwest Penstemons

By Dee Strickler

The Flower Press

192 Larch Lane
Columbia Falls, MT 59912



Beautifully reproduced, full color photographs of 80 species and most of their varieties, 192 pages, with illustrations, a key to Penstemons in WA, OR, ID, and MT.

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REMINDER TO RENEW

Don't let your membership in the Montana Native Plant Society lapse. Send in your renewal today! See the membership form on page 11. Every one of you are important to the conservation of native plants in Montana.

MNPS EXPENSES AND INCOME: 3/97 TO 2/98

<u>CATEGORY</u>	<u>ACTUAL EXPENSES</u>	<u>ACTUAL INCOME</u>	<u>DIFFERENCE</u>
General Operating Expenses			
Membership	- 321.00	3597.00	+ 3276.00
Newsletter	- 3331.00	40.00	- 3291.00
Operating Budget	- 693.00	1354.00	+ 661.00
Interest Income	(0.00)	(953.00)	
Board Expenses	(-533.00)	(0.00)	
Donations	(0.00)	(401.00)	
Awards	(-105.00)	(0.00)	
Committees	(- 55.00)	(0.00)	
Total General Operating Budget:	- 4345.00	+4991.00	+ 646.00
Special Projects			
Fundraisers:	- 0.00	1028.00	+1028.00
Annual Meeting	(0.00)	(857.00)	
Notecards	(0.00)	(171.00)	
Special Projects:	- 2603.00	0.00	- 2603.00
Source Guide & Publications	(- 547.00)	(0.00)	
Small Grants Fund	(-1000.00)	(0.00)	
Friends of the Herb.	(- 450.00)	(0.00)	
Kelsey Library Project	(- 580.00)	(0.00)	
Flathead Teacher Trnk.	(- 26.00)	(0.00)	
Total Special Projects:	- 2603.00	+1028.00	-1575.00
TOTALS	- \$6948.00	+ \$6019.00	- \$929.00*
<i>* Difference to be covered by MNPS savings.</i>			
Water Howellia Endowment	- \$243.28	+\$1463.00	+\$1219.72

FINANCIAL REPORT

MNPS PROPOSED 1998 BUDGET

<u>CATEGORY</u>	<u>PROPOSED EXPENSES</u>	<u>PROPOSED INCOME</u>	<u>DIFFERENCE</u>
GENERAL OPERATING EXPENSES			
Membership	- 300.00	4500.00	
Newsletter	- 3500.00	0.00	
Operating Budget	- 725.00	650.00	
Interest Income	(0.00)	(450.00)	
Board Expenses	(- 550.00)	(0.00)	
Donations	(0.00)	(200.00)	
Awards	(- 100.00)	(0.00)	
Committees	(- 75.00)	(0.00)	
TOTALS	- \$ 4525.00	+ \$5150.00	+ \$ 625.00
SPECIAL PROJECTS			
Projects:	- 1620.00	+ 300.00	
Source Guide & Publications	(- 70.00)	(300.00)	
Small Grants Fund	(- 500.00)	(0.00)	
Friends of the Herbarium (2 yrs.)	(- 50.00)	(0.00)	
Flathead Glacier Park Flora	(- 1000.00)	(0.00)	
Fundraisers:			
Annual Meeting 97	- 0.00	+ 500.00	
Notecards*	0.00	+ 100.00	
TOTALS	- \$ 1620.00	+ \$ 900.00	- \$ 720.00
SUMMARY TOTALS	- \$ 7045.00	+ \$7550.00	- \$ 95.00

Old Man's Garden by Annora Brown

J.M. Dent & Sons (Canada) Limited

first printing February 1954

If you are interested in plant lore, you will love this book. Annora Brown has woven Native American legends, the writings of Alexander Mackenzie and other early North American explorers together with botanical poetry into a book that brings life to the study of plants. Though out of print, this book is worth looking for. The following are excerpts from a story that appears in the book about the pasque-flower, or prairie crocus. The artwork below was done by Frances Elliott, about whom an article appeared in the Winter 1998 edition of *Kelseya*.

How the Prairie Anemone Got its Fur Coat

Wapee shivered and drew his robe tighter about him. It was cold there on the hillside, but the shiver was more of fear and loneliness than of cold. Always before he had slept in the tipi of his parents, where his father could protect him. But at last his father had said, "Wapee is no longer a child. It is time he went to the hills to dream and become a man."

Three more nights like the one just past and he must return to his father and his friends and tell them that he was not a man but only a coward, whom the Great Spirit had found unworthy even of a dream.

The day grew warm and the feeling of failure lifted. Besides, Wapee was no longer alone. He had found a friend. Beside him sat a beautiful flower, as white as the snow...

"Little brother," he said, "it is cold for such fragile loveliness on a night like this. I will lie close and shelter you with my warm robe..."

So while one part of his mind slept, the other part kept watch over the flower.

When the dark of night was just preparing to meet the light of day, the flower spoke. "Yesterday, Wapee, you were sad because you had been afraid. He who never knows fear is a fool..."

All day Wapee pondered on the saying of the flower, and next night, he again shel-

tered it with his robe of fur. Again, it spoke.

"You have a kind heart, Wapee. It will lead you to great things."

Next night, the flower spoke again. "Wisdom and a gentle heart will make of you a great leader."

Before he rose to go to his people, Wapee thought once more of the flower. "Little brother," he said, "three nights you have comforted me... tell me now three of your wishes..."

Want to know what they were? In the answer lies the secret as to how the prairie anemone got its fur coat. Hope you find a copy of the book!
-Editor



Lewis & Clark

from page one

shrub were ordered from the Bitterroot Native Growers in Corvallis, Montana.

Prickly pear, which Meriwether Lewis called, "...one of the beauties, as well as the greatest pest, of the Plains..." was vegetatively propagated instead of being grown from seed. Local landscaper Jasmine Krotkov contracted with the Forest Service to collect 50 Prickly pear pads along the Missouri River breaks and root them for planting at the Center.

To provide ground cover for erosion control on all the disturbed soil, 150 pounds of grass seed was sown in the fall of 1997. The seed selected were cultivars of native grasses: Rosana western wheatgrass, Critana thickspike wheatgrass and Sodar streambank wheatgrass.

In April 1998 over 4000 containers of native shrubs, wildflowers and grasses from the Coeur d'Alene and Bitterroot nurseries will be transplanted to complete the landscaping.

Rydberg and Bessey

from page one

and these are published in Rydberg's 1900 Catalog of the Flora of Montana. There were 1,976 species in Rydberg's catalogue and of these, 163 were new to science; 776 species in Rydberg's catalogue had not been mentioned in his reference book, John Coulter's 1885 Manual of the Botany of the Rocky Mountain Region. Some of the other Spanish Basin plants collected this past summer are the same species represented in the 1897 collection and deposited at MONT. These include *Antennaria microphylla*, *Arnica cordifolia*, *Phacelia linearis*, *Phacelia heterophylla*, *Linum lewisii*, *Prunella vulgaris*, *Castilleja miniata*, *Phlox multiflora*, and *Rosa woodsii*, along with the aforementioned *Oxytropis besseyi*. It's rather a comfort in these times of rapid change to imagine the *Oxytropis besseyi* there in Spanish Basin, continually blooming, perhaps, a hundred summers, with some wetter, some cooler than others, repeatedly stretching its papilionaceous banner, wings and beaked keel of purple to the sky, open to a pollinator.

* (Although at that time it had already been named, as seen on the 1886 specimen collected by Peter Koch, as *Oxytropis Blankinshipii*; this Rydberg and Bessey mounted specimen was even later annotated by Blankinship himself saying "identical with *O. Blankinshipii* of Nelson!").

SUGGESTED READINGS
Tiehm, A. and Stafleu, F., 1990. *Per Axel Rydberg: A Biography, Bibliography and List of His Taxa*. Memoirs of the New York Botanical Garden Volume 58.

Rydberg, P.A., *Flora of Montana and the Yellowstone National Park*. 1900. Memoirs of the New York Botanical Garden, Volumes 1 and 2.

MONTANA NATIVE PLANT SOCIETY *** Membership Application/Renewal

DATE _____

NAME (please print) _____

ADDRESS _____ CITY/STATE/ZIP _____

PHONE (____) _____ NEW _____ RENEWAL _____

**STATEWIDE MEMBERSHIP WITH
CHAPTER AFFILIATION***

MEMBER-AT-LARGE
(No chapter affiliation)

PLEASE NOTE: Canadian subscribers must add \$4.00 to each category to cover additional mailing costs.

___ \$18 I. Individual

___ 22 II. Family

___ 35 III. Business/Organization

___ 300 IV. Lifetime Members (one-time payment)

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\$ _____ Additional Donation (may be specified toward a particular project or the general operating fund)

MAKE CHECKS PAYABLE TO:

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P.O. Box 8783

Missoula MT 59807-8783

*AREAS COVERED BY CHAPTERS:

ARTEMISIA CHAPTER - Yellowstone and Carbon Counties; southeastern/south-central Montana

BEARTOOTH MOUNTAIN CHAPTER - South-central Montana, the Beartooth Plateau country

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

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

FLATHEAD CHAPTER - Flathead and Lake Counties plus Glacier National Park

KELSEY CHAPTER - Lewis & Clark and Jefferson Counties

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

VALLEY OF THE FLOWERS CHAPTER - Gallatin, Park, 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. Additional chapters are in the planning stages for other areas. Watch for announcements of meetings in your local newspaper. Ten paid members are required for a chapter to be eligible for acceptance in MNPS.

YOUR MAILING LABEL TELLS YOUR

CLASS OF MEMBERSHIP (See I, II, III, IV above)

CHAPTER AFFILIATION: (ART=Artemisia; CAL=Calypto; CF=Clark Fork; F=Flathead; K=Kelsey; MF=Maka Flora; VOF=Valley of the Flowers)

DATE YOUR MEMBERSHIP EXPIRES. If your label reads "2/97" your membership expired February 28, 1997. Use this form to renew your membership **immediately**. Please drop us a note if any information on your label is incorrect. Please notify us promptly of any address changes.

Membership in the 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 included in the Winter issue of *KELSEYA*. Anyone who has not renewed by the time the Summer *KELSEYA* is ready to mail will be dropped from the mailing list/MNPS membership roster.

A Note From The President

Tulli Kerstetter of Bozeman has served the Society as Vice President since 1995, and Newsletter Editor for the

past year. She recently moved from Montana, and is sorely missed by the Board and the membership. THANK

YOU Tulli, for the energy and enthusiasm that you shared with us! We wish the best for you and your husband.

Dennis Nicholls of Noxon, longstanding Western Montana Board

Representative, has volunteered to take on the duty of Newsletter Editor. Thanks, Dennis, for taking on this key role in the Society.

- Wayne Philips

MONTANA NATIVE PLANT SOCIETY

The Montana Native Plant Society (MNPS) is a 501-C-3 (not-for-profit) corporation chartered for the purpose of learning more about plants native to our state and their habitats, and of sharing that knowledge. Contributions to MNPS are tax deductible, and may be designated for a specific project or chapter, for the Small Grants fund, or may be made to the general operating fund.

Your yearly membership fee includes a subscription to *KELSEYA*, the newsletter of MNPS, published quarterly. We welcome your articles, clippings, field trip reports, meeting notices, book reviews — almost anything, in fact, that relates to our native plants or the society. Please include a line or two of “bio” information with each article. Drawings should be in black ink or good-quality photocopy. If you send clippings, please note the source, volume/issue, and date. All meeting and field trip notices, field trip reports or announcements should be mailed to *KELSEYA* CALENDAR, P.O. BOX 1632, NOXON, MT 59853. All items should be typed and on 3.5” diskette in Microsoft Word for Windows or in a generic ASCII file.

CHANGES OF ADDRESS AND INQUIRIES ABOUT MEMBERSHIP IN MNPS SHOULD BE SENT TO: MNPS MEMBERSHIP, P.O. BOX 8783, MISSOULA MT 59807-8783. GENERAL CORRESPONDENCE SHOULD ALSO BE DIRECTED TO THE MISSOULA ADDRESS. Do NOT send to the *KELSEYA* editor.

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 plants or the interests of MNPS members.

Deadline for the SUMMER issue is JUNE 10. Please include meeting/field trip notices through September, if possible. The SUMMER issue of *KELSEYA* will be mailed by July 1.

**IF YOU MOVE, PLEASE NOTIFY US AT
MNPS MEMBERSHIP
P.O. BOX 8783
MISSOULA MT 59807-8783**

FIELD TRIPS FLYER

If you have a lineup of field trips planned for this summer, send your schedule in so we can put it altogether on the Annual Field Trips flyer. Deadline is May 1st.
Please send information to the address below.

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*'Tis sweet, in the green spring
To gaze upon the awakening fields around,
Birds in the thicket sing,
Winds whisper, waters prattle from the ground;
A thousand odours rise,
Breathed up from blossoms of a thousand dyes.*

William Cullen Bryant

MONTANA NATIVE PLANT SOCIETY
***KELSEYA* Editor**
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