

Kelseya

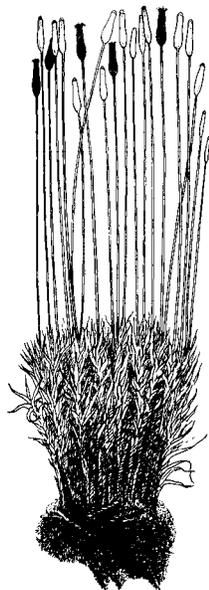
Newsletter of the Montana Native Plant Society

OF MOSS AND MEN

By Joe Elliott

Some of the most beautiful and rare Montana mosses grow on substrates that are not widely viewed as aesthetic ideals. Genera such as *Tetraplodon*, *Tayloria*, and *Splachnum*, typically grow on the dung of forest carnivores, moose, and sometimes on other organic material such as regurgitated owl pellets or carcasses of small mammals. These mosses are widespread in the northern boreal forest and reach their southern-most range distribution in the conifer forests of Montana.

Dung-growing mosses have several interesting, and somewhat unappetizing features that allow them to reproduce and excite the nerdy moss enthusiast. The genera *Tayloria* and *Tetraplodon* produce copious capsules with large, green, sticky spores



Tetraplodon mnioides

that have the essence of fresh excrement. Although the mosses and capsules are found on well-aged blobs of poop that don't smell or resemble a fresh deposit along the trail, the spores that are produced have an even stronger odor than the original stuff on which they are growing.

I was first alerted to a specimen of

Tayloria on Lookout Pass by a swarm of flies buzzing around a small mound along a dirt road. On closer inspection, I observed flies covered with sticky, vile-smelling, green spores flying off, presumably in search of coyote (wolf, wolverine, lynx, or mountain lion?) scat. It is a remarkable reproductive adaptation that these mosses produce really smelly spores even though the feces on which they are growing have long since lost their typical scatological ambiance. It would appear that the spores must be deposited on fresh dung, but do not reach the zenith of their growth (produce visible moss plants) until the dung has appropriately aged. Not unlike a fine wine.

Species of the genus *Splachnum*, produce bright red or yellow capsules in the shape of Frisbees.

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Wetland Plants... On the Road Again

By Peter Lesica

I often relieve a bad case of cabin fever by spending a few weeks of late winter camping in southern Arizona. It's great to drive along the roads and have native wildflowers like lupine and globemallow, growing on the shoulders. Here in the Rockies and Great Plains our

roadside flora is dominated by introduced weeds. Even so, many of our native plants occur on road shoulders too, and a few are hard to find anywhere else. Where do our roadside or ruderal plants come from; where did they grow before there were roads? Do the native plants that

(Continued on page 5)

Montana Native Plant Society on the Web!

Ever wonder what the Native Plant Society is up to? Can't find your last copy of the *Kelseya*? Want to know the date for the next Native Plant Society program in your area? Check out the Montana Native Plant Society's website. The address is: www.umt.edu/mnps/ Our website is skillfully managed by Marilyn Marler, our webmaster. She can be reached at: marler@selway.umt.edu



President's Platform

Betty Kuropat



Season's Greetings Plant Friends!

In my part of the state, winter is here. The leaves, including larch needles, have fallen and lie under a blanket of snow. The colors of bark, stems, and berries seem bright when they are exposed and backlit by the snow. I like to get out this time of year, explore the mostly dormant plant world, and enjoy the subtle beauty. I also enjoy going to the winter meetings and programs of the Flathead Chapter. There is always something new and interesting to learn. Sometimes I'm in Missoula when the Clark Fork Chapter meets and I've been to some good programs there. I really like their herbarium night with hands-on learning.

So, I wonder... Why don't more people show up for programs or field trips? Is anyone out there? Is anyone interested in conserving and learning and teaching about Montana's native flora? I know you are, because we have over 400 paid members. But,

listening to the chapter representatives at our fall State Board meeting, I wonder. Several, if not all, of the chapters are struggling to remain active. In some cases, the membership is small and spread out, so it's hard to get together in winter. In other cases, all of the organizing is left to one or a few people and they can't do it forever without help. And of course, everyone is too busy! Some of the reasons chapters form are to share local plant knowledge and common interests, and to organize projects that educate others about plants in the locale. There is strength and synergy among a group of plant enthusiasts.

Instead of making me wonder, would you take a moment to think about and then tell me what you want from and what you might give to the Montana Native Plant Society? You pay dues; is it for getting the *Kelseya* 4 times a year? If so, what kinds of articles interest you? Would you contribute articles or ideas? If

you are a chapter member, what do you expect from your chapter? How would you like to see your dues used? Do you have ideas for field trips or programs? Would you attend if the events were more in line with your interests? Anything else? Please share your ideas with me or any other State Board representative.

If you want to share your thoughts and opinions more publicly, write them in a letter-to-the-editor. The *Kelseya* will publish letters from members about any Society or plant related issues. If we can't get face-to-face, we can still discuss our concerns.

You are Invited!

State Board Meeting
March 2, 2002
10:00 a.m.
Lewis & Clark Library
Helena, Montana

Betty can be reached at 2688 Witty Ln. Columbia Falls, MT 59912 (406) 892-0129 e-mail: edk@digisys.net

2002 Annual Meeting Set!

mark your calendars early

The Flathead Chapter is delighted to announce that we have chosen dates and a location for the Society's 2002 annual meeting. Our gathering is planned for the weekend of June 28th-30th at the Theodore Roosevelt Memorial Ranch, located along Dupuyer Creek at the foot of the spectacular Rocky Mountain Front Range. The mission of the working cattle ranch, owned by the Boone and Crockett Club, is research, teaching, and demonstrating integrated livestock/wildlife conservation. Our meeting place will be the Rasmuson Conservation Center on the ranch, a newly constructed meeting facility with full amenities. I visited the Center in September to check out the site, and was awestruck by the incredible view off the deck. I was also very impressed with the hospitality of the Center's education coordinator, and MNPS member, Lisa Flowers. Our chapter is already actively planning events and field trips in the diverse land-

scapes where the Rocky Mountains meet the Great Plains. Look for a registration packet in the spring *Kelseya*, and register early! We are planning one of the best annual meetings ever, and hope you can join us. For more information on the meeting site check out the following websites, or call me at 406-862-3044.

http://www.boone-crockett.org/bc_conservation_final.html
http://www.boone-crockett.org/bc_conservation_trmr.html
and for a view off the deck: http://www.boone-crockett.org/IMAGES/f1w23_big.jpg

Maria Mantas

AND NOW...A FEW WORDS FROM YOUR EDITORS

The *Kelseya* would like to solicit your ideas, opinions and comments on issues that affect native plants and plant communities. If you have something you would like to share, or would like to get a dialogue going, drop us a note, write an article or send a letter-to-the-editor.

Conservation: Thumbs Down



This year the North American Hunting Club sent its members seed packets packaged by American Meadows Inc. The packets contained exotic grasses and forbs to attract deer. Instructions on the packets suggested creating an area of bare soil and planting the seed to bait deer. The Conservation Committee wrote both the North American Hunting Club and American Meadows to protest this practice and advise them that digging up what could well be native plants to sow exotics is hardly conservation and could well be bad for deer in the long run if the disturbance results in an infestation of noxious exotics such as knapweed. We hope they will discontinue this practice in the future.

Conservation: Thumbs Up



The U.S. Fish and Wildlife Service (USFWS) listed Spalding's catchfly (*Silene spaldingii*) as a threatened species under the Federal Endangered Species Act (ESA) in early November, more than six years after it was petitioned for listing by the Montana Native Plant Society (Flathead Chapter) and the Washington Native Plant Society (Northwest Chapter) along with the Biodiversity Legal Foundation and Peter Lesica. In the interim, the petitioners sued the USFWS twice, once in 1998 to force them to make a 90-day finding on whether listing may be warranted and again in 2001 to make a final listing decision. The second suit was settled by USFWS agreeing to list 14 species and proposing eight more for listing, while conservation groups agreed to extending the deadline for critical habitat designations. In addition to Spalding's catchfly, USFWS listed showy stickseed, Washington's rarest plant, southern California's San Diego ambrosia, golden sedge from North Carolina and Holmgren

milkvetch found in Nevada and Utah. Three frogs, a beetle, two fish, a shrew and a mussel were also listed. A spokesman for USFWS stated that the long delay was caused by lack of funding. Sufficient money was freed up by postponing the critical habitat designations. Spalding's catchfly joins water howellia (*Howellia aquatilis*) and Ute lady's-tresses (*Spiranthes diluvialis*), bringing to three the number of Montana plants listed under the ESA. The Flathead Chapter also successfully petitioned the listing of water howellia. Thanks to David Crawford, Neil Levine, Dawn McKnight, Stephanie Parent, EarthLaw, the Pacific Environmental Advocacy Center and Earthjustice Legal Defense Fund for persevering.

Many people are not aware that the ESA only protects plants on federal land. So although the majority of Spalding's catchfly plants are in Montana, the listing will have no direct effects here because all known populations are on state or private land. The listing will affect several important populations in Washington on federal land administered by the Bureau of Land Management.

Peter Lesica

MONTANA LANDSCAPES AND INVASIVE PLANTS

The 2002 noxious weed calendar is out! Called "Montana Landscapes and Invasive Plants", the calendar focuses on native landscapes in Montana and the threats posed to those environments by noxious weeds. The Montana Native Plant Society was a major player in production of the calendar and many of the featured photos were provided by MNPS members. The calendar is packed with useful information about Montana native plants and invaders. You will want to keep a copy for reference. The calendars are an excellent way to introduce people to the goals of MNPS. You can pick up your copy at your local Conservation District Office.

New Booklet Promotes Xeriscaping with Natives

Residential landscapes in Montana may never be the same! At least that's the goal of the new booklet *Creating Native Landscapes in the Northern Great Plains and Rocky Mountains*. The principles of Xeriscape™ are offered as the alternative to conventional landscape practices. This method is gaining in popularity as a way to conserve water and energy, and decrease inputs of environmental pollutants.

The 15-page booklet, with more than 90 color photographs, is chock full of ideas on how to develop a beautiful, environmentally friendly landscape using native plants. Step-by-step guidelines walk through the planning and design process, and the stages of site inventory and preparation. Text, tables, and sidebars contain illustrations, tips, and do's-and-don'ts for selecting appropriate grasses, wildflowers, trees, and shrubs. The practical issues concerning water conservation and irrigation, landscape maintenance, and plant protection are reviewed. For those who need reminding (where have all those memory cells gone?) the last page is a "To Do" list of seasonal, maintenance chores. This publication was made possible through the combined efforts of the Montana Association of Conservation Districts, the USDA Natural Resource Conservation Service (NRCS), and the Bridger Plant Materials Center. Copies are limited, and can be obtained by calling the local USDA Service Center (listed in the phone directory under Federal Government, Department of Agriculture) or the NRCS State Office in Bozeman, Montana (406-587-6842). It is also accessible on the Internet via <http://www.mt.nrcs.usda.gov>.

Susan Winslow

Conducting Weed Risk Assessments After Wildfire

By Maria Mantas

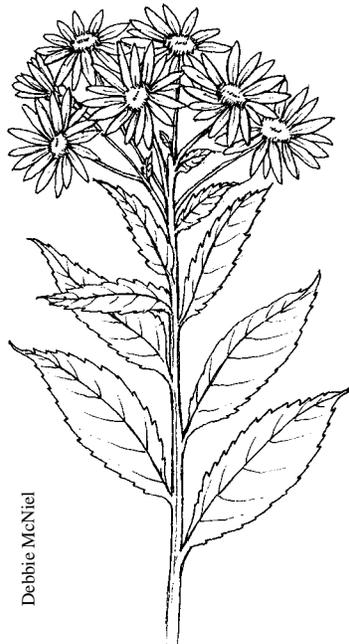
The risk of weed invasion after wildfire has become a great concern. One potential effect of fires is the possibility that they will facilitate the spread of noxious weeds. This concern is now greater than ever because of increasing acres burned by wildfires, as well as an increasing trend in the introduction of new weed species. In addition, there is evident growth of infestations for species that have existed here for decades. For example, the number of Montana counties infested by spotted knapweed (*Centaurea maculosa*) doubled between 1980 and 1990. In addition, 65 new exotic species (414 to 479) have been documented in the state in the last 20 years (Rice 2001).

The last issue of *Kelseya* contained an article discussing how noxious weeds can become problematic after wildfire. The article described revegetation treatments for areas that have been burned in order to "provide a desired plant community that can suppress weeds through resource competition." It is true that wildfire can greatly exacerbate a weed infestation. However, the degree to which weeds can infest and subsequently affect native plant communities in burned areas is dependent on a number of factors that should be evaluated before revegetation is considered. The key elements in assessing the risk of weed invasion are the susceptibility or vulnerability of the site to invasion, the ecological threat to susceptible plant communities, and the probability of exposure of the burned site to weeds.

Two factors determine a burned site's susceptibility to weed invasion. The first is the bio-physical setting. Simply put, the bio-physical setting is the environment

that constrains the kind of plant community that can grow there. For example, a steep north-facing slope at 6500 feet in a cold and moist climate will yield a different plant community than one found at 3500 feet in a warm, dry valley floor. Most ecologists in Montana use habitat types to characterize the biophysical environment. Knowing the habitat type is key in identifying which weed species, if any, have the ability to become established on a site.

The second factor that will help



Debbie McNeil

Aster conspicuus is a common forest plant, but is seldom seen in flower. However, following fire, this rhizomatous plant re-sprouts and blooms in profusion.

to determine site susceptibility is the amount of ground disturbance prior to the burn. For instance, has the site been previously logged or heavily grazed? How much exposed bare mineral soil is there, versus ground covered with a deep layer of duff? In upland sites, generally the drier the habitat type, and the more

exposed bare soil, the more susceptible the site is to infestation by most of Montana's noxious weeds. Drier more exposed sites are more vulnerable because most of our noxious weeds are pre-adapted to these conditions, having evolved in similar environments in their countries of origin.

In burned areas, evaluating how hot the fire burned into the soil layers is important in determining vulnerability of the plant community. Sometimes the burn can be so hot, or smolder so long in the duff, that heat transfer down into the soil can burn off all of the soil organic layers and cause high mortality of above ground plant material. If this happens, the site could be susceptible to weed infestation. However, a blackened area where all above ground vegetation has been consumed can be deceptively misleading in this respect. More often than not, fire has little effect on roots and buds buried mere inches below the soil surface. Stickney has documented that most native plants (40% - 70%) in Montana's upland coniferous forests, have the ability to re-grow from buds that survived below the soil surface after fire. Following a severe 1985 fire in the Little Belt Mountains, Wayne Phillips documented an average of 45% canopy cover of forbs and 22% canopy cover of shrubs the second year after the fire, mostly from the survival and re-sprouting of native plants top-killed by the fire. In the North Fork Flathead's Moose Fire, I witnessed re-sprouting of native sedges, grasses, and lupines in an area where less than ten days before there had been a raging firestorm! I have documented similar conditions throughout a number of large burns in the Bob Marshall and Scapegoat Wilderness Areas, where only days after the fire was out, native plants began re-staking their claim to the ground they had occupied for centuries.

If a plant community has been determined to be susceptible to weeds, the degree of threat to the plant community must then be considered. Contrary to what many

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...Roads (Continued from page 1)

commonly occur on roadsides have anything in common; do some native habitats tend to foster closet ruderals? I think they do. Of course many native ruderals can be found in naturally open, dry habitats like eroding banks. Interestingly, many other roadside natives come from wetland habitats such as stream banks and ephemeral ponds.

This notion first occurred to me many years ago when I studied vernal pools in Sanders County. Before then the only places I had seen clustered tarweed (*Madia glomerata*), popcorn flower (*Plagiobothrys scouleri*) and western burnet (*Sanguisorba occidentalis*) were road shoulders and two-tracks. Now here were these small plants in distinct vegetation zones in the bottom of ephemeral ponds along with other (often uncommon) native annuals. I was reminded of this connection more recently when Joe Elliott brought me a tiny plant resembling a ball of lint. He found it along a road near Noxon. It turned out to be tall wooly-heads (*Psilocarphus elatior*), a new plant for Montana! It is usually found around vernal pools from British Columbia to California, but here it was on a road shoulder in northwest Montana. Joe searched for the plant throughout the surrounding area but found it only along the road.

Howell's gumweed (*Grindelia howellii*) presents another interesting example of a wetland plant adopting a roadside habitat. Howell's gumweed occurs only in the Seeley Lake-Ovando area of Montana and at one (probably introduced) site near Coeur d'Alene, Idaho. In the early 1980's nearly all of the known locations for this plant were from roadsides or disturbed grasslands. Those of us working on a rare plant inventory for Montana wondered at this strange distribution. In 1986 Steve Shelly searched for this rare Montana endemic throughout its known range. He found 49 populations! Forty-four were growing with weedy exotics along roads, and in timber harvest areas and disturbed meadows, but five were from glacial pond margins and were associated with native plants. This rare wetland plant had found a new home and probably expanded its range by moving onto roads. The story is much the same for



curly-cup gumweed (*G. squarrosa*), a plant so common on roads that many people think it's an exotic.

Large animals such as deer, elk or bison often visited ponds to quench their thirst, and caused a good deal of disturbance and soil compaction in the process. Wave action and frost-heaving also caused disturbance to pond margins in some cases. So pond-margin plants are adapted to moist, compacted soil and disturbance. Roadsides provide a similar habitat in several ways. Water runs off pavement or compacted tracks, and snow gathers in wheel ruts, providing extra moisture similar to a small, depressional wetland. In addition, the soil of road shoulders and two-tracks is compacted and disturbed by passing vehicles just as if they were majestic bison. Three native plants commonly found along roads in eastern Montana are buffalo bur (*Solanum rostratum*), squirreltail barley (*Hordeum jubatum*) and bracted vervain (*Verbena bracteata*). All three also occur in shallow wetlands and may have been most common in buffalo wallows before European settlement.

Gravel bars and disturbed banks of rivers and large streams also provide moist, disturbed habitat and are the native home to many common roadside plants. Black cottonwood (*Populus trichocarpa*) is the premier riparian tree in western Montana, establishing on moist, recently disturbed streambanks. Although we all associate cottonwood with rivers and streams, it also commonly occurs along logging roads in the mountains where grading and surface runoff provide a similar habitat. Cocklebur (*Xanthium strumarium*) and marsh-elder (*Iva xanthifolia*) are familiar, large, broad-leaved plants along roads in eastern Montana, but they are just as common on gravel bars of the Yellowstone and Missouri systems where spring flood waters scour the banks. Common witchgrass (*Panicum capillare*) and spotted lady's-thumb (*Polygonum persicaria*) are other familiar riparian plants found along roads.

So although roadsides don't look much like wetlands and riparian areas, in a way, they are, and some of our pond- and stream-margin plants have taken a liking to

Good website!

In the winter/spring 2001 issue of *Kelsey*, we reported on a newly launched journal from the University of Idaho called the *Native Plants Journal*. At the suggestion of Linda Iverson, we visited their website at: www.nativeplantnetwork.org and found it to be interesting and full of good information. You can search for published articles, read about general propagation techniques or browse the protocol database for information on how to grow your favorite natives. Their goal is admirable: to provide technical and practical information on the growing and planting of North American native plants. Sounds good to us!

Yellowstone River Plan

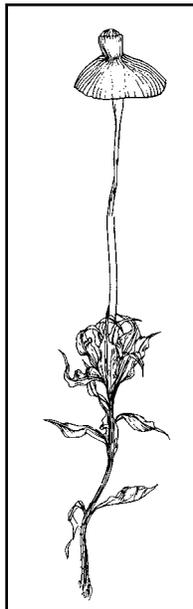
Montana Audubon and 16 other organizations have released a plan on how to restore and protect the Yellowstone River. The Action Plan is available from Montana Audubon. Check out the website at: www.yellowstoneriver.org

...Moss (Continued from page 1)

These expanded capsules, with their distinctive odor, are convenient landing strips for flies, which pick up spores and carry them to the next nutritional end-product.

Given the relatively common occurrence of carnivore dung in the boreal forests of Montana, it is puzzling to me that these mosses are so infrequently collected. Perhaps, many botanists would not feel appropriately rewarded by cradling a lump of organic detritus, bristling with ornate and fragrant capsules, in their palm and getting close enough to get a good look with a hand lens. Perhaps, finding a rare moss does not have the snob value of finding a rare orchid.

Regardless, one Montana botanist was bold enough and sufficiently confident of his social status to send me a fine specimen of *Tetraplodon mnioides*, the first record for Montana. This collection was previously reported in *Kelsey*. It is of interest (at least to me) that this same moss was collected from Mount Kilimanjaro, in East Africa, growing on old leopard excrement containing bones and hairs of small mammals.



Splachnum rubrum

A SHORT PRIMER ON MOSS

What is a moss? Most of us have seen green, leafy plants growing on the ground, on rocks, on trees, or as the above article points out, on other organic matter. Some of this green stuff we have all seen is probably moss. Mosses are plants without a vascular system (non-vascular). That means they don't transport nutrients and water through a xylem and phloem, but get moisture directly from the air, rain, or from whatever they are attached to. In fact, in the absence of true roots, they act somewhat like sponges. They have chlorophyll and use photosynthesis to produce food. Mosses are spore-producing. The part sticking up out of the leaves in the preceding illustrations is the capsule on a stalk, or seta. This whole structure is called the sporangium. The sporangium contain the spores that, when released, can form a new green plant. Moss can also form new plants from bits broken off from the main plant. And some moss plants produce an asexual reproductive structure called a gemma, which when broken off, can form a new plant as well. With three possible ways to propagate, these small plants have been quite successful.

Mosses can be found in all 50 states. In Montana, well over 400 moss species have been documented. Mosses are found in greater abundance in moist, humid environments such as woodlands, however, certain mosses require very dry conditions. Mosses are sometimes used as ecological indicators and some are even more habitat-specific than vascular plants. Some mosses are only found in acidic conditions, such as on granite rock, others are found only on limestone or in areas with a high calcium content. Some moss can grow only with sufficient moisture, and would only be found in the wettest parts of the state, while other mosses are cosmopolitan and can grow just about anywhere and are usually the first mosses to turn up after disturbance, such as fire or logging. Winter is a great time to study moss. They can be collected anytime and after drying, can be revived in water and studied during the long, dark days of winter. A good time to collect moss, though, is in the spring because they generally put up their spore producing bodies while there is sufficient moisture around to help insure germination. The spore producing bodies are helpful for identification. So, dust off your microscope and extend your plant examinations into the winter months by delving into the world of moss.

DB

MNPS Welcomes the New Heritage Botanist

The Montana Natural Heritage Program is pleased to announce that Richard Caners has been hired as Botany Manager. Richard comes to us from Winnipeg, Manitoba, where he has worked in a variety of grassland and forest ecosystems in the central and western Canadian provinces. He has an undergraduate degree in business and a Master's degree in Botany from the University of Manitoba, where his primary research focused on the ecology and structural development of forest communities in Riding Mountain National Park. He has also helped Parks Canada set up a long-term monitoring program for the recovery of fescue prairie grasslands. Richard is familiar with a broad range of vascular plants that occur in Montana, including a good many of our species of concern, and cultivates a special interest in non-vascular plants (particularly bryophytes). He has assisted in teaching several biological courses, presented his work at conferences, and has taught plant community workshops to landowners in the Interlake Region of Manitoba where his family has a long farming history. He is also an avid nature photographer and a violinist. We feel very fortunate to have Richard join our ranks, and believe that the Montana botanists' community and our information-users will benefit from his energy, knowledge and diverse interests. Richard will be wrapping up some business, spending holiday time with family, and then relocating to Montana during the latter part of December. He'll be here full-time beginning in January, and can be reached at 406-444-0536. His email address is rcaners@state.mt.us. Please help us welcome him to the state and share your knowledge about our plant species of concern, special places and key issues!

Susan Crispin

Susan Crispin is the Director of the Montana Natural Heritage Program.

Big Sky Sketches

By Scott Miles

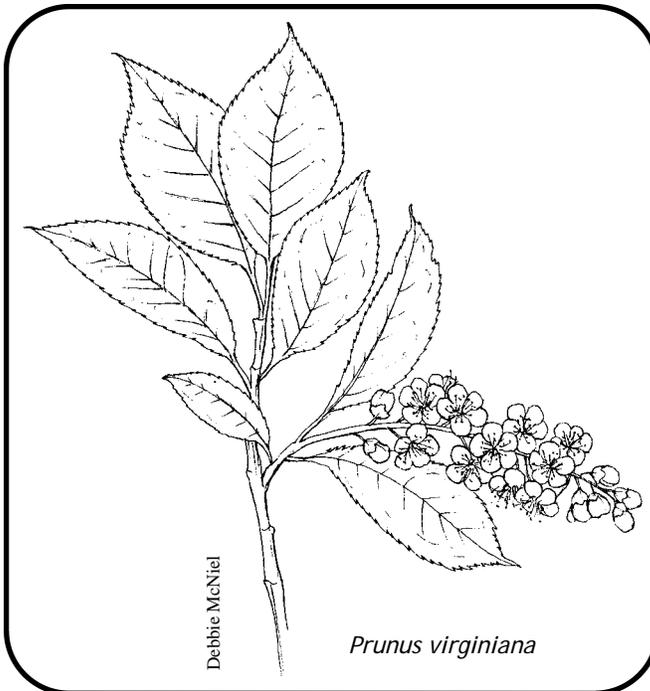
Chokecherry

If your only knowledge of chokecherry (*Prunus virginiana*) was a mouthful of fruit just off the vine, their small size, large pits and sour, astringent taste would surely make you conclude that they had not been widely used as food. Also, since some parts of the chokecherry plant are poisonous (containing cyanic acid in doses which can kill livestock), it seems unlikely that it would have been used medicinally by many Native Americans. Nevertheless, this native shrub, which is closely related to both wild and cultivated prunes and cherries, has a long history of use.

Native Americans used chokecherry extensively, especially in the eastern parts of Montana, which largely lacks many of our other fruit-bearing shrubs. The fruits, including the seeds, were often used in the famous "pemmican", a dried meat mixture preserved for times when fresh meat and other foods were unavailable. Chokecherries were also pulverized, dried and stored as patties (the poison dissipates with exposure to air), to be used later in a variety of other foods.

Medicinally, Native Americans used parts of the chokecherry plant as a relief for stomach problems.

Captain Meriwether Lewis adopted this native remedy and reportedly made a tea from chokecherry twigs to treat stomach cramps and fever.



Given the apparent danger from cyanic acid, the early preparation methods must have resulted in diluted concentrations of this substance.

This plant has not been incorporated greatly into modern medicine. (Ed. Note: Chokecherry bark is still occasionally used by modern herbalists as a respiratory sedative for coughs and as a chest cold medication.) Now, chokecherry serves as a

flavoring agent. Similarly, chokecherry use as food has decreased as more easily cultivated fruits have replaced this once important staple of Montana's early people. They are still a favorite among those who long for the tart berry taste in jams, jellies and syrups.

Chokecherries are common throughout Montana, growing in riparian areas or on moist, open hill-sides and valleys. Though usually considered a shrub, the plants can become tree-like with a single stalk and heights up to twenty-five feet. The white flowers are showy and are borne as an elongated cylinder at the ends of small branches. During the summer look for evidence of pollination success and the effects of late frosts by observing the numbers of berries compared to numbers of earlier flowers.



KATHY'S CHOKE- CHERRY SYRUP

Pick a bucket of very ripe chokecherries. Wash them thoroughly. Put them in a large kettle and put enough water in the kettle to keep them from sticking. Simmer until the berries are very soft and mushy. Run the berry mixture through a sieve to remove the seeds. Pour the pulp back into a pan and reheat. Don't let it stick and burn. Add honey to taste and stir well. The syrup will be somewhat pulpy, not clear. It can be frozen in small plastic containers, or canned in a water bath. This syrup retains the distinctive chokecherry flavor and is great on pancakes or waffles.

CALENDAR

ARTEMISIA CHAPTER

Hal Vosen 232-2608

BEARTOOTH MOUNTAIN

Jean Coleman 855-4500

CALYPSO CHAPTER

Annie Greene 683-6594

CLARK FORK CHAPTER

Thursday January 10, 7:30 p.m.
Learn how rural residents and land management agencies are coping in the aftermath of wildfire. Join Peter Kolb, Extension Forester, for "Vegetation Restoration after the Fires of 2000." Rm. L14 Gallagher Business Bldg, UM Campus.

Tuesday January 29, 7:30 p.m. Herbarium Night. Remember that paleobotany field trip last September? Well, now we're going to identify them. Even if you didn't make the field trip, join Charles Miller and see if you can still recognize those "Ancient Plants of the Blackfoot Valley" after many thousand years in the rocks. Rm. 303 Natural Sciences (Botany) Bldg, UM Campus.

Thursday February 14, 7:30 p.m. Journey to eastern California's wetlands with Kevin Murray to hear about "The Recovery of the Endangered Fish Slough Milkvetch." Rm L14 Gallagher Business Bldg, UM Campus.

Tuesday February 26, 7:30 p.m. Herbarium Night. Ace Forest Service botanist Scott Mincemoyer will guide us through the "Wiley Willows of Montana." Rm. 303 Natural Sciences (Botany) Bldg, UM Campus.

Thursday, March 14, 7:30 p.m.
Jim Romo, a grassland ecologist on sabbatical leave from the University of Saskatchewan, will show slides and tell stories about "The Native Flora of the Northern Great Plains." Rm. L14 Gallagher Business Bldg, UM

Campus.

Tuesday March 26, 7:30 p.m.
Herbarium Night. Peter Stickney concludes the exploration of "Montana Liliaceae: The Stout-stemmed Lilies." Rm. 303 Natural Sciences (Botany) Bldg, UM Campus.

Thursday April 11, 7:30 p.m.
Get ready for wildflower season. Join Missoula photographers who will show slides of "Montana's Forest Wildflowers." Rm. L14 Gallagher Business Bldg, UM Campus.

EASTERN MONTANA

position vacant

FLATHEAD CHAPTER

All Flathead Chapter meetings are at the Montana Logging Association Building, 2224 Highway 35, east of Kalispell, across and just east of Hooper's Nursery. The conference room door is at the back of the building. Everyone is invited to the 5:30 general meeting. Programs start at 7:00. Call Rachel Potter (892-2446) for more information.

Wednesday, January 16
Cathy Schloeder will give a program on her work with "Vegetation Dynamics of Ono National Park in Ethiopia."

Wednesday, February 20
Terry Divoky, educator and elementary school librarian will present "Basic Introduction to Four Native Plant Families." This program is great for kids, teachers, and those starting to learn about native plants. Tell your friends and neighbors.

Wednesday, March 20
Naturalist Ralph Waldt will give a stunning slide show on the "Northern Continental Divide Ecosystem."

Wednesday, April 17
"Native Plant Gardener's Open

House." Native plant growers of the area will be invited to share information on how to obtain and grow native plants. Bring your own success stories to share with other gardeners! Native plants will also be available to purchase.

Wednesday, May 15

Maria Mantas, Flathead National Forest Botanist and Flathead Chapter President will give a hands-on workshop on "Preparing Herbarium Grade Plant Specimens" (collection ethics will also be discussed).

KELSEY CHAPTER

Kelsey Chapter programs will be held throughout the winter. Members will be notified by e-mail or telephone and by a notice in The Independent Record. For more information call Kathy at 449-6586.

Wednesday, January 16, 7:00 p.m.
Carla Wambach will present an interactive program on her trip to China, with a focus on bamboo, the panda and the lotus. Lewis & Clark Library, Helena.

Tuesday, January 22, 7:00 p.m.
Hands-on night! Drake Barton will present a lesson on "*Pesky Potentillas*" in room 321 at Carroll College. Bring your hand lens and *Vascular Plants of Montana*. No experience keying out plants required.

Tuesday, February 12, 7:00 p.m.
Hands-on night! Andrea Pipp will conduct a session on Montana lichen in room 321 at Carroll College. Bring a hand lens. No experience necessary.

Wednesday, February 20, 7 p.m.
Wayne Phillips will present a program and slide show on "Montana Orchids". Lewis & Clark Library in Helena.

Tuesday, March 19, 7:00 p.m.
Hands-on night! Andrea Pipp will present a mini-session on Montana

moss and liverworts in room 321 at Carroll College. Bring a hand lens. No experience necessary.

MAKA FLORA CHAPTER

Aldon Joyes 385-2579

VALLEY OF FLOWERS

Valley of Flowers Chapter meets the second Monday of each month. Programs will begin at 7:00 p.m. in Room 108 (on the first floor using the door at the bend of the "L") of the Agbio-science Building on south 11th. Parking is available in the lot to the north of the building (they do not require a permit at night). For more information call Joanne Jennings at 586-9585.

Monday, January 14

Jan Nixon will be with us to give a report on "Fire Succession in Yellowstone Park." She has been keeping stats since the "big one" in 1988.

Monday, February 11

Cathy Cripps will take us on a trip to see "Wild Mushrooms." She promises to tell us something about the kinds you can safely eat.

Monday, March 11

Come and hear about WEEDS. Think you have problems, it could be worse!

Monday April 8

Peter Lesica will present "Ecology and Natural History of Woody Draws in Eastern Montana."

WESTERN MONTANA

Sam Culotta 837-4298

TIME TO RENEW!

Your membership in MNPS expires at the end of February. Please use the form on page 11 and send in your renewal today! Don't miss a single issue of *Kelseyia*. Montana's native

...*Weeds* (Continued from page 4)

people think, not all noxious weeds can out-compete native plants in all environments. For example, subalpine fir forests face little threat from spotted knapweed, even though this species can become established there. Spotted knapweed is simply not very competitive against native plants in this cold/moist forest environment. However, a different story unfolds when evaluating the threat to a warm/dry ponderosa pine stand where spotted knapweed is far more competitive.

Finally, the probability of exposure should be assessed. In other words, what is the likelihood that weed seeds will find their way to the burned site? Are there vectors present that may facilitate weed spread into the burned area, such as roads, grazing animals, or off-highway vehicles? Obviously, exposure is high if there was a significant pre-burn noxious weed population. The tansy ragwort (*Senecio jacobaea*) population greatly expanded after the Little Wolf Fire of 1994. In this case, forest types that had been disturbed by heavy handed logging practices and grazing prior to the burn were highly susceptible to the small, but prolific quantity of tansy ragwort seeds present from the pre-burn population.

The article in the last *Kelseyia* discussed measures that can be taken to revegetate burned areas where there is a concern about noxious weed invasion. The methods stated are sound advice for burned areas where there truly is a risk. However, throughout the state, the majority of the acreage burned in the 2000-2001 wildfires occurred in forests. Except for the driest sites, forests are typically much less vulnerable to weed invasion than grasslands and dry shrublands, especially where few weeds existed prior to the fire. In most forests, native plants readily re-colonize burned sites by vigorous re-sprouting or germinating in the ashes. The more mesic and less disturbed the site was prior to the burn, the less likely weeds will become a problem.

If reseeding is deemed necessary to fend off weed invasion, the next

decision is what species to use. Most ecologists would recommend a non-competitive and preferably native plant seed mix; however, the current supply of native plant seed derived from local genetic stock is very difficult indeed to come by. Seeding even the most "desirable non-natives" for fear of a possible weed infestation can cause more harm than good by introducing other exotic species that, in some cases, can compete with native plants almost as effectively as noxious weeds! Therefore, great care should be taken in choosing which species to use.

Landowners need to fully evaluate the risks of weed invasion when considering revegetation in burned areas. A weed risk assessment needs to consider the susceptibility of the site, the threats to the plant community, and the probability of exposure to weed seeds. Only then can informed decisions with respect to revegetation of burned areas be made.

References:

Rice, Peter. 2001. Invaders Database. <http://invader.dbs.umt.edu/>

Stickney, Peter. 1988. *Conceptual Basis for Secondary Succession in Northern Rocky Mountain Coniferous Forest*. Unpublished Report.

Calamagrostis rubescens (pinegrass) is a native, perennial, rhizomatous grass that quickly sprouts from rhizomes and establishes from seed after a burn. Pinegrass is seldom eliminated from a site, even after severe wildfire. The grass undergoes mass flowering in the years immediately following fire, allowing for rapid colonization. Check out the Fire Effects Information website for more information: www.fs.fed.us/database/feis



SMALL GRANT REPORT

Noxious Weeds:

Bandits in our Woods

By Jami Belt

Oxeye daisies are a noxious weed?!

The question was repeated throughout the morning as participants arrived and began perusing the educational literature and displays on noxious weeds. Twenty-one participants began comparing who had the biggest, baddest invasion of oxeye daisies as they waited at Lone Pine State Park on the beautiful morning of July 11, 2001 for the start of the Glacier Institute free educational field workshop called "Noxious Weeds: Bandits in our Woods". The workshop was sponsored by a grant from the Montana Native Plant Society, which funded transportation costs. Additional support was provided by the Flathead County Weed Department, the Montana Department of Natural Resources and Conservation (DNRC), Flathead Land Trust, and Plum Creek. In keeping with Glacier Institute's mission to provide experiential education about the Crown of the Continent Ecosystem to promote sustainability, the workshop focused on the impact of noxious weeds on the ecosystem, monitoring weed invasions and control of weeds through Integrated Pest Management.

Lone Pine State Park made a great site for the workshop!

We chose Lone Pine State Park due to the abundance of a wide variety of noxious weeds amidst a tenaciously surviving population of native grasses and wildflowers. The morning began with the question directed at the participants, "What makes you interested enough in noxious weeds to come spend a full day learning about them?" The replies revealed an audience from a diversity of interests - landowners, ranchers, county regulatory agents,

Plum Creek employees, botanists, nursery workers, and Glacier National Park employees. Many people expressed a sense of urgency, yet hopelessness about a problem that is growing so quickly with no easy solution.

Professional presenters teach about noxious weeds...

Maria Mantas, a Flathead National Forest botanist, addressed the issue of "What is a noxious weed and why should you care", showing pictures of several species, maps of the spread of weeds over time and photos of the impacts on native plant communities. Maria discussed the difficulties of defining a noxious weed when some invasive non-native species, such as Timothy grass, are viewed as desirable in certain environments. Dave Lange, a Glacier National Park biologist, introduced the spectrum of approaches toward noxious weed control, from the "nozzle heads" to the "hands-offers" and all those that fall in between, highlighting the complexity of managing weeds in a way that keeps everyone satisfied.

Participants head to the field for hands-on noxious weed training!

Once the morning chill had evaporated, participants divided up into three groups and dispersed to different locations at Lone Pine for a round robin in the field. A group of 5 women joined Dave Lange and his co-workers Jen Asebrook and Dawn LaFleur in a hands-on session on weed mapping. Students took detailed notes as the three biologists walked them through the process of photo point monitoring the weeds on their land or their favorite outdoor recreational site. One group accompanied Jed Fisher, Flathead County Weed Department Superintendent, to learn about the concept of Integrated Pest Management. He showed examples of weed control, from bio-control to hand pulling. Maria Mantas kept the third group rapt with field identification of the

noxious weeds and native plants at Lone Pine. I overheard several students pointing and proudly identifying plants ("sulphur cinquefoil, rough fescue, spotted knapweed...") they had just learned as they passed them on the walk back to the meeting room.

Haskill Mountain demonstrates intact plant communities...

After lunch, we all checked and rechecked each others socks and pant cuffs for stubborn cheatgrass seeds and anything else that may have been attempting to hitchhike over to Haskill Mountain where we would spend the afternoon looking at a site with a more intact native plant community. Presenters kept the same topics during the afternoon session. The difference, however, was a focus on learning about native plants and the positive benefits of preserving them. The contrast between the two sites was incredible and a great way to show the impact of noxious weeds on the ecosystem.

The noxious weed take-home lessons...

We returned to Lone Pine for final questions with our minds full of information and ideas. Several participants were anxious to begin identifying the plant species in their yard to monitor the spread of weeds. Others said they felt equipped with enough information to begin working with their neighborhood council on developing an Integrated Pest Management Plan. All participants agreed that the workshop should become an annual event. Thankfully, due to some savings on our transportation costs, there is enough grant money from the Montana Native Plant Society for transportation for next year as well! After a successful "Bandits in our Woods" workshop, that wrapped up many months of planning, I went home and silently asserted that I do indeed have the biggest and baddest oxeye daisy invasion of them all, but at least now I have some ideas of what to do about it.

Jami Belt is Glacier Institute Program Director.

MNPS Chapters & the Areas They Serve:

- 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 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. Watch for meeting announcements in your local newspaper. Ten paid members are required for a chapter to be eligible for acceptance in MNPS.

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

DATE YOUR MEMBERSHIP EXPIRES: If your label reads "2/99" your membership expired February 28, 1999. Use this form to renew your membership TODAY! Please drop us a note if any information on your label is incorrect. Please notify us promptly of address changes.

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 included in the winter issue of *Kelseya*. Please renew your membership before the summer issue of *Kelseya* so your name is not dropped from our mailing list. Your continued support is crucial to the conservation of native plants in Montana. THANK YOU!

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Your yearly membership fee includes a subscription to *Kelsey*, the newsletter of MNPS, published quarterly. We welcome your articles, clippings, field trip reports, meeting notices, book reviews or anything that relates to native plants or the Society. Please include a line or two of "bio" information with each article. Drawings should be in black ink or a good quality photocopy. If you send clippings, please note the source, volume/issue, and date. All meeting and field trip notices, field trip reports, articles or announcements should be mailed to *Kelsey* Editors, 314 Travis Creek Rd., Clancy, MT 59634. All items should be typed and if possible put on a 3.5" disk and saved in Microsoft Word or rich text format (rtf.) for a PC. Please include a hard copy with your disk. They can also be sent electronically in the same format as above.

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

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: **Autumn— September 10;**
Winter— December 10; Spring— March 10; Summer— June 10.

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Visit our website at: www.umt.edu/mnps/ or contact our webmaster, Marilyn Marler at: marler@selway.umt.edu

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