**'ENDLESS SEA OF GRASS'...NO LONGER**

- Peter Lesica

When Lewis and Clark first set eyes on eastern Montana it must have seemed like an endless sea of grass. Starting about a hundred years ago farmers began to break the sod in order to grow crops. Sodbusting continues to this day. Every year when I visit eastern Montana I see native prairie that has just been turned over for the first time. Few people view this with the same dismay as when they see a clearcut forest or a polluted wetland. Yet a cut over forest will usually return to its former condition in a century or less. Reestablishing native prairie can take many times that long, and it's a resource just as precious.

The grasslands of the Great Plains comprise the largest floristic province in the United States and the second largest province in North America. Grasslands are diverse ecosystems. Over 3,000 species and subspecies of vascular plants in 160 families are recorded from the Great Plains north of Texas. Many species of both plants and animals are endemic to these grasslands. The soils of the region store carbon and are the principle source of this country's agricultural bounty. Unfortunately, recent interest in the conservation of biological diversity has focused on tropical and temperate rain forests, while relatively little attention has been given to grasslands.

Although the Great Plains province occupies approximately one-fifth of the United States, most of the native prairie has been lost to agricultural development, and many grassland community types have almost completely disappeared. States such as Illinois, Indiana, Iowa, Minnesota, Missouri, North Dakota and Wisconsin have lost more than 99% of their native prairie. Even Texas has lost 90% of its tallgrass prairie and 80% of its shortgrass prairie. The Canadian provinces have not fared much better.

Numerous species of grassland plants and animals are listed as threatened or endangered under the Federal Endangered Species Act or are candidates for listing. Where I grew up in southern Wisconsin and northern Illinois, it was not uncommon for people interested in botany to drive for hours to see shooting stars or camas in a remnant prairie no bigger than a large parking lot.

Montana probably has more native Great Plains prairie left than any other state except Texas. But here too the native prairie has been lost to the plow. Unfortunately, no one knows how much native range has been converted in Montana, because native grasslands and exotic pastures are not differentiated in statistics kept by the Soil Conservation Service (SCS; recently renamed the Natural Resources Conservation Service), Agricultural Stabilization and Conservation Service, or the Agricultural Statistics Service. However, we do know that cropland has steadily increased since World War II, with the biggest increase in the early 1980s (see Figure 1, Page Six). It appears that our native grasslands are still being broken, even though most of this land is highly erodible and marginal for crop production.

--- continued on Page Nine

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For another perspective on CRP, see the article by Terry Wamsley on Page Eight
From the President

After several false starts spring is finally right around the corner. All the winter planning has resulted in a sprouting of MNPS activities. The first Montana Rare Plant Conference, "Conserving Montana's Rare Plants and Special Habitats," is scheduled for April 26 and 27. Bonnie Heidel, Angie Evenden, Steve Shelly and others, working through their professional capacities, have organized several interesting talks on Wednesday. Hope you can attend.

Many field trips are announced in this issue for spring and summer. You will receive an additional mailing of updated field trip announcements in mid May. Don't forget, National Wildflower Week is May 22–28. Celebrate our rich plant heritage by participating in an activity that week. Also, our annual meeting in the Little Belts, June 22–24, provides more plantseeing. A schedule for the three day event and a pre-registration form are included in this issue.

Rare plants are certainly worth our attention. After hearing Steve Shelly's talk on rare endemics and participating in Endangered Species Act Workshops, I cannot over stress the importance of every member of our plant world. With plant and animal species disappearing at an alarming rate, we need to voice our concern to our legislators and our neighbors. Sally Orr has written a brief summary of the status of the ESA and tells you how to get informed and involved. Ellen Galligan has drawn some lovely portraits of our rare flora. Montana still has a vast treasure chest of native plant gems; we can't let them disappear.

Much of the new legislation being passed on both state and federal levels weakens laws that protect our natural resources from uncontrolled development. As a result, we need to focus more on education as a way to heighten appreciation for native flora. The board of directors, education committee and local chapters must work harder in this direction. One way to become more active is to attend the Education committee meeting in the Little Belts. Besides a project grant program we will look at new activities and goals. And obviously the conservation committee can push forward on both the state and local chapter levels as well. Peter Lesica's article on native grasslands helps us understand the important responsibility land owners and agricultural advisors have in conserving these diverse systems.

Do I sound like a president?

Board Meeting Happenings

The Winter board meeting was jammed with much discussion and debate. Funding was approved for two special projects. The Artemisia chapter is working on notecards. Second, a cash grant to help fund projects involving native plants of our state will be finalized by the education chairman and committee. The budget for the coming year was approved and appears in this issue along with the annual financial report.

Vice president Janet Johnson is leaving the state, following in the footsteps of many past executive officers. We are losing her to Arizona, where she will work on riparian management for the Forest Service. She was very active in her short tenure, helping with the newsletter calendar page. Luckily we have a new volunteer for that duty. The vice-president position is vacant at this time, we need nominees! Contact Anne Garde, Clark Fork president, with any suggestions. Thanks for your work, Janet.

Our membership report revealed that wall over half of our members have not yet renewed. So get that check in the mail! You'll miss us if you don't.

I encourage you to join the Friends of the U of Montana Herbarium. See more info in this newsletter.

See you in the Little Belts.

Linda Iverson

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<<CONSERVATION BULLETS>>>

MNPS FILES TO HAVE SPALDING'S CATCHFLY LISTED AS THREATENED/ENDANGERED

The Flathead Chapter of the Montana Native Plant Society, the Northeast Chapter of the Washington Native Plant Society, the Biodiversity Legal Foundation and Peter Lesica have filed a petition with the U.S. Fish and Wildlife Service to list Spalding's Catchfly (Silene spaldingii) as a threatened or endangered species under the Federal Endangered Species Act. Spalding's catchfly (Silene spaldingii) is a wildflower native to palouse grasslands of southeast Washington, adjacent Oregon and Idaho and is disjunct in northwest Montana. Most of the plant's pre-settlement habitat has been converted for agriculture. Most currently known populations are small, and all are threatened by weed encroachment. The Fish and Wildlife Service has 90 days to respond to the petition.

THE ENDANGERED SPECIES ACT

The Endangered Species Act (ESA) is up before Congress for reauthorization in 1995, after one-year extensions in 1993 and again in 1994. Originally implemented in 1973, the ESA is generally thought to have been successful in salvaging the remaining members of numerous species and to have been instrumental in the recovery of others. Reauthorization bills have been introduced in both houses of Congress (SB 921 and HR 2043). However, several other bills have been introduced in an attempt to significantly weaken the Act by adding requirements for giving increased consideration to economic impact, or by requiring payment to private landowners affected by designation of critical habitat (SB 191 and HR 490). These bills are currently in committee, but it is expected that voting may occur very soon.

Unfortunately passage of even a modified ESA is not the end of the story. The Endangered Species Coalition and other environmental interests are very concerned that the Contract With America stands to severely undercut 25 years of environmental legislation and make implementation of any ESA nearly impossible.

The consequences of weakening or loss of the ESA has dire repercussions for the future of native plants and native plant habitats. Human population continues to expand and is unlikely to be controlled in our lifetimes. As people continue to move into undeveloped areas native plants and their habitats will increasingly be lost. The ESA - flawed though parts of it may be - at least - continued next page
AN IDEA FOR DEVELOPING COUNTY PLANT LISTS

Here's an exciting idea that might be pursued by MNPSers in any corner of the state. Watch the newsletter for more ideas on this kind of a project.

As Montana is developed at an ever-increasing rate, native plant populations disappear under the onslaught of bulldozers and asphalt. Therefore it is of great importance and some urgency to understand the distribution of our native plants, particularly in each county of Montana. The list would ideally be similar to Klaus Lackschewitz's Vascular Plants of West-Central Montana - Identification and Ecology: Annotated Checklist, and would include the general location of each plant and its relative abundance. The initial list would, of course, not be complete -- but newly located plants could easily be added as they are found.

Thanks to the monumental work of Klaus Lackschewitz in Ravalli County, along with other botanists (especially Jaculyn Cory, who also made extensive collections there), Klaus was able to develop this above-mentioned Annotated Checklist. Then thanks to Wally Albert, who found many new and historical plants which, when added to recent finds by Lackschewitz, Steve Shelly and several others, including myself, resulted in a nearly-complete list of vascular plants for Ravalli County. These species, with description, locations and relative abundance can all be found in Lackschewitz's revised edition of Vascular Plants of West-Central Montana - Identification Guidebook.

This Ravalli County example might be applied to other counties in Montana. The first step would be for interested persons to work together to compile a list of vascular plants for each individual county from existing sources. These sources could eventually include a computerized list of the collections contained in the Herbaria at the University of Montana and Montana State University, as well as other college and agency collections in the state. The gigantic task of developing such lists is underway in the major herbaria, but completion of these computerized lists will take several years.

Meanwhile, beginning county lists could be compiled using such sources as Dorn's Vascular Plants of Montana, and distribution maps in Booth's Flora of Montana: Dicotyledons, Part II (1966), and the Great Plains Flora Association's 1977 publication Flora of the Great Plains. Floristic checklists both published and unpublished should be sought out (e.g., Peter Lesica's published checklist and updates for Glacier National Park, and Lackschewitz's checklist for the alpine areas of the Beartooth Mountains, published in the recently-reissued Beartooth Country, by Bob Anderson. The Montana Natural Heritage Program may have reference to unpublished sources. Botanists who have done work in a county could be contacted for a list of their finds. In counties where botany field trips have taken place, the field notes and lists kept by the participants might be useful. County Extension Services often have lists of plants found in their county, especially range grasses and those plants considered weeds.

The basic county plant lists could then be entered into a computer and printed out for botanists, both amateur and professional, to reference when they are in the field. That is where the fun begins. Doing botany field work is like treasure hunting, and when you record a new plant for your county it is comparable to finding a treasure. Finding a new native plant for the state is still possible, and speaking from experience is totally exhilarating.

When a plant which is not on the county's list is found in that county, a record of the plant should be made, either by collection of a voucher specimen or a good photograph of the plant, or by in-field verification by another botanist. That plant would then be added to the county list. Collections should only be made if there is a sufficient population of the plant so a small collection will not affect its reproduction at the site (see MNPS Collecting Guidelines). Voucher specimens would be deposited at an existing herbarium. Reports of state species of special concern would also be sent to the Montana Natural Heritage Program using their rare plant report form. New sites -- previously unknown populations of plants already on a county's list -- and abundance of each plant should be noted while in the field and updated on the computer.

The end result would be useful county plant lists and a fairly complete picture of Montana's plants. Developing a plant list for your county would be an interesting and exciting project, allowing professional botanists, amateur botanists and anyone interested in plants to work together for a common goal. The excitement of finding a rare native plant touches everyone concerned. The real reward, however, is in the search, to become better acquainted with all of the beautiful grasses, flowers, trees, bushes and other interesting plants that live in your area and record them so future generations will know and maintain what lives there.

<<<<CONSERVATION BULLETS>>>>

continued from previous page:

affords some protection for those species we are able to locate in time.

It is very important the the MNPS and individual members write or call their senators and representatives to express their views regarding the ESA and the Contract With America. The Endangered Species Coalition and member organizations could also use as much support as possible. The Endangered Species Coalition will provide you with up to date information on legislative activities. They can be contacted at: Endangered Species Coalition, c/o National Audubon Society, 666 Pennsylvania Ave SE, Washington DC 20003; phone number is 202-547-9009.
BOTANICAL EXPLORATION IN MONTANA: PART II,
20TH CENTURY HIGHLIGHTS

The first "Flora" of Montana was compiled by Per Axel Rydberg in 1900. This was simply an annotated checklist. Rydberg began collecting in Montana in 1895 while with the Division of Agrostology in Washington. Shortly thereafter he became associated with the New York Botanical Garden.

John M Coulter's Manual of Rocky Mountain Botany, 1885, was still the "text-book" on the flora of the state (Blankinship, 1905). Aven Nelson of the University of Wyoming revised this book in 1909, and it remained the conservative reference for many years.

Joseph W Blankinship, Professor of Botany at Montana Agricultural College in Bozeman from 1898 to 1905, began collecting in the state in 1890. In 1905 he provided an annotated supplement to Rydberg's Flora.

Rydberg completed his Flora of the Rocky Mountains and Adjacent Plains in 1917. This treatment was much more liberal than the Coulter and Nelson Manual, recognizing many more species. Thus, Rydberg became known as a "splitter" and Nelson was known as a "lumper."

William Edwin Booth came to Montana State College in Bozeman in 1941. His Flora of Montana (Part I, Monocots, 1950; Part II, Dicots, with J C Wright, 1959) was the first Montana treatment offering keys for identification, dissections, and distributions. The next part of this series will look at W E Booth and his contribution to our knowledge of the state's flora in more detail.

References:

Robert D Dorn is the well-known author of the Flora of Montana and the Flora of Wyoming, and was keynote speaker at the MNPS 1994 Annual Meeting.

there's always more to learn...

One of the fascinations of the natural world is that you can never hope to learn everything there is to know about even one single organism. Opportunities to learn range from the casual – field trips and slide shows – to more organized classes that cover a few days to a week, to courses offered by the colleges and universities in the state.

The Yellowstone Institute and Glacier Institute have operated in their respective National Parks for the past several years, and offer a "middle ground" in the learning process: most courses require little or no prior knowledge or background, but offer a chance for extending your understanding and appreciation of the natural world.

Botany-related courses offered at Glacier Institute this summer include:

June 24, Wildflowers of the Eastern Slopes
June 25, Native Flora of Glacier
July 9, Wild Medicinal Herbs I
July 15, Wildflower Wanderings: Logan Pass and the Highline Trail
July 16, Wildflower Wanderings: Preston Park
July 29–30, Mountain Meadows: Glacier's High Country
July 31–Aug 2, Glaciers to Glacier Lilies: Geology and Plant Ecology of the Park
August 2, Wild Medicinal Herbs II

Courses at Yellowstone Institute (this year celebrating its 20th Anniversary) include:

June 16–18, Wild Edible Plants and Medicinal Herbs
July 21–22, Wildflowers of Yellowstone
July 23–27, Wildflowers Llama Trek
July 28–30, Alpine Wildflower Walks

Academic credit is available for some of the courses; charges vary depending on the number of credits. Full information on availability and registration requirements is available form the Institutes. In addition to the classes outlined above, both provide a fascinating array of other learning opportunities in various fields, for "students" of all ages.

Many courses fill up early, so contact the Institutes soon if you're interested in any of these. Glacier Institute is at P O Box 7457, Kalispell MT 59904; phone 406–756–3911. Contact the Yellowstone Institute at P O Box 117, Yellowstone Park WY 82190; 307–344–2294.

MNPS PUBLICATIONS AVAILABLE

We have several special handouts available to our membership. If you missed getting any of these or need more, please write: Linda Iverson, HC 88, Box 3733, Big Timber MT 59011. A SASE (#10 envelope or larger, depending on what you're requesting) is appreciated for any of the following:

List of Native Plant Related Books
A Guide to Montana Native Plant Gardens and Gardeners
Guidelines for Collecting Native Plants
MNPS introductory brochures

The Montana Native Plant Source Guide is also available by sending $3.00 to the above address. Postage is included in this cost. Please make checks for the Guides payable to MNPS.

Page 4

KELSEYA, Spring 1995
GREAT NATIVES IN THE GARDEN

This is the first in a series highlighting some of our lesser-known natives which make great landscape plants due to their easy care, long seasons of interest, or other striking features.

Mountain kittenails (Synthyris missurica, of the Scrophulariaceae) is one of the loveliest harbingers of spring at the UM campus Native Plant Garden. Stalks of bright blue flowers bloom for nearly three to four weeks, attracting the earliest bees. The individual flowers are small but numerous on 2-4" stalks that rise above the 6" plants. The rounded, glossy dark green, 1-3" leaves green up after flowering and form a good ground cover the rest of the year, although they do tend to look a bit tattered by the end of the winter.

The Native Plant Garden has mountain kittenails growing among ferns and trillium, and the mix of leaf shapes is interesting long after blooms are gone.

The plant has flourished on the eastern side of the Native Plant garden, where it is medium-to-well shaded by surrounding trees. It likes the moist, mulched shaded area that mimics its natural habitat in the subalpine zone of the Bitterroot Mountains. Synthyris missurica barely qualifies as a Montana native, reaching as it does just to the Montana border by Lolo Pass and south among the Bitterroot Range. Most of its range is through high areas west across Idaho to Oregon.

Other Synthyris species occur sporadically from central Montana to the Oregon and California coasts. Synthyris canbyi has been found only in portions of the Mission Mountains, in northwestern Montana. Synthyris pinnatifida occurs on open alpine ridges in the Bitterroot and Rattlesnake Mountains. S. platycarpa is quite uncommon, occurring only in a small area by the Lochsa River in Idaho.

While mountain kittenails is not a common sight in garden centers, it really does deserve more attention. A few seed catalogs that focus on native plants are starting to carry seed. Synthyris missurica has reseeded readily in the Native Plant Garden and other sites it likes, and seems to persist for many years. The seeds are large and easily handled. Dozens of tiny seedlings pop up from the seeds scattered from a few plants. Germination seems to occur mainly in spring. If you choose to gather your own seeds, please remember the MNPS recommended guidelines for collecting native plant seed, and be sure of your identification before collecting. Whether you enjoy mountain kittenails in your garden or in the mountains, the sight of those glorious blue flowers at the very beginning of spring is sure to lift your spirits.

ANNOUNCEMENTS

CELEBRATING WILDFLOWERS!

National Wildflower Week, May 22-28, 1995

During the week of May 22-28, and throughout the spring and summer, the National Forest in the Northern Region of the U S Forest Service will be participating in a nationwide celebration of wildflowers on public lands. Celebrating Wildflowers is a collaborative program sponsored by the U S Forest Service, the Bureau of Land Management, and numerous partners - including the Montana and Idaho Native Plant Societies.

This national program, which was initiated by the Forest Service in 1992, strives to:

* promote the importance of conservation and management of native plants and their habitats;
* increase public support and appreciation of wildflowers.

Wildflower Week will kick off numerous activities which will take place during the spring and summer on the nation's public lands. Many National Forests in the Northern Region will be sponsoring activities. Further information may be obtained from the Forest Service office nearest you, or Steve Shelly at the USFS Northern Region office in Missoula, 406-329-3041.

There is a National Wildflower Hotline available from April through July each year. The toll free recording - 800-354-4595 - is updated each week, providing information on areas to go for peak wildflower viewing, and it also highlights activities occurring in each region of the country.

ENJOY THE WILDFLOWER SEASON IN 1995!

- Steve Shelly

SEEKING SILENT AUCTION ITEMS

We're planning a GIANT silent auction for June 24 at the Annual Meeting, and your help is needed to make it happen. Perhaps you know of local merchants, artisans or craftspeople who might be willing to contribute something related to our common interests. Maybe you are that artisan or merchant. Or perhaps your white elephant can be someone else's treasure.

Donations of almost anything related to nature, such as plants, flowers, books, photographs, drawings, paintings, outdoor clothing, etc. would be appreciated. Even if you're not able to attend the meeting, you can send it to the silent auction chairman, Doris Farley, 116 Riverview #6W, Great Falls MT 59404. If you plan to bring or send an item to the auction, please contact Doris at 406-452-9365.
MEETINGS

POMPEY'S PILLAR, MAY 13
Meet at 8 am at the Billings Chamber of Commerce Office on 27th St, or at Pompey's Pillar at 9:30 am. We'll explore two ecosystems at Pompey's Pillar; the undisturbed prairie and the riparian areas. For info, call Don Heinze (256-1624).

BRIDGER FOOTHILLS WILDFLOWERS, MAY 13
The south-facing slopes and ridges of the Bridger foothills offer early-season viewing of many of the Gallatin Valley's typical wildflowers. Join Jan Nixon for a ramble along the base of the Bridgers, starting at 1 pm. Sponsored by Museum of the Rockies, trip size is limited, and there is a small fee. Call 994-2251 for reservations.

CLARK FORK PALISADES, MAY 13
Meet at the east end of the East Gate Shopping Center parking lot at 10 am. We'll carpool to the Limestone Palisades of the Clark Fork. Peter Lesica will lead a hike up and over the limestone cliffs just east of Bearmouth. Clark Fork bladderpod (Lesquerella carinata var. langulata) is endemic to this area and should be in bloom. Bring a lunch. For additional info, call Peter (728-8740).

WILDFLOWER WEEK HIKE, MAY 20
Meet at 10 am at Willoughby 40 for a National Wildflower Week hike with Bitterroot Forest botanist Linda Pietarinen. For more info, call Linda (363-7172).

PHILLIPS CREEK/BEAR DANCE, MAY 20
Meet at Flathead Bank of Bigfork parking lot at 10 am. We'll hike the Phillips Creek, Bear Dance Trail in search of early wildflowers. An easy 3-1/2 miles, level or downhill. Leader - Ann Morley. Call 886-2242. Bring lunch.

STALKING THE WILY KELSEYA, MAY 20
Meet at 9 am at the Helena National Forest Supervisor's Office on Airport Rd. for caravan/car pooling. Kelsey Chapter's Keith Leatherman will lead a hike to the Big Belt Mountains to see Kelseyopsis uniflora and Lesquerella kiusil in bloom. Celebrate National Wildflower Week!

COMO LAKE AREA
This will be a weekday hike, one day during May 22 - 26, sponsored by the Bitterroot NF: Hike the Como Lake area with Bitterroot Forest Botanist, Linda Pietarinen. Call Linda for details (363-7172).

MEETEETSE SPIRES, MAY 27
Meet at 8 am at the Billings Chamber of Commerce on 27th St, or at 9:30 am at the Forest Service Office south of Red Lodge on Hwy 212. We're going to visit the Meeteeetsee Spires. For info, call Don Heinze (256-1624).

(PS - This may be your last chance to visit this area with Don before he moves to Oregon...don't miss it!)

CENTENNIAL VALLEY/RED ROCK LAKES, JUNE 10
On Saturday, June 10, join Jan Nixon for an all-day ecology/botany trip to the Red Rock Lakes NWR in the Centennial Valley. Sponsored by Museum of the Rockies, travel will be by van, so there is a small fee. Make reservation with the Museum, 994-2251. We'll explore various habitats around the lake, from...
RED ROCK LAKES, continued:
Eroding sand dunes to forest riparian areas. Waterfowl are abundant, and there's a good chance of seeing trumpeter swans. Trip size is limited, so make reservations early.

RARE PLANT HIKE, JUNE 10
Look for some rare plants in the Flathead area with Maria Mantas. For meeting place, time and other arrangements, call 755-4824.

SWAN RIVER RNA, JULY 1
Meet at 9 am at Swan Chapel parking lot in Swan Valley. Hike in the Swan River Research Natural Area with Neal and Pattie Brown and the MT Wilderness Association. Hike is 4-5 miles, moderately strenuous, with 200 ft. climb, stream crossings and no trail. Bring water, lunch and shoes that can get wet. Call 837-5018 for reservations by June 30.

Knapweed Pullout, JULY 6
Eradicating the knapweed at the Kirk Hill Nature area south of Bozeman is an ongoing project of Valley Lemonade Bozeman is an ongoing project of Valley. For meeting place, time and other arrangements, call Darlene at 837-5018.

LITTLE WOLF FIRE REGENERATION, JULY 8
Explore the Little Wolf Fire for plant regeneration with Flathead Chapter's Steve Wirt. Call 862-5452 for reservations and rendezvous instructions.

SWEETGRASS HILLS, SUNDAY, JULY 9
The Sweetgrass Hills of north central Montana are among the most botanically-interesting areas of the state. These hills were nunataks during the last extension of the continental ice sheet - surrounded by ice and snow, but protruding above it. They retain an unusually diverse forest flora today, though completely surrounded by grasslands and cultivated agricultural areas.

The Alberta Native Plant Society and MNPS have scheduled a rare opportunity for a visit to the westemmost of the three main hills - West Butte - which is in private ownership. The joint field trip will meet at the Duty Free store (on the Montana side of the border) at the Sweetgrass border crossing at 9 am. Bring lunch and water. For more information, contact Darlene and Arlo Skari in Chester, 406-292-3602.

SIYEH PASS TRAIL, JULY 21
Hike Siyeh Pass Trail, Glacier National Park, through numerous plant communities - climb 2600 ft, hike 12 miles. Call Rachel Potter, 892-2446 for reservations and meeting instructions.

CRAZY MOUNTAIN OVERNIGHT, JULY 22-23
Two day backpack up Big Timber Canyon, with a day hike along the ridge below Conical Peak for a look at alpines. Botanist Steve Shelly will help us identify the plants along the way.

Contact Linda Iverson at 932-5840 for all the details; number of participants is limited because of fragile terrain.

GRASSLANDS OF THE GALLATIN VALLEY, LATE JULY
Look for specifics in the field trip mailing in May. Contact Linda Iverson for more info (932-5840).

PURPLE LOOSESTRIFE PULLOUT, AUGUST 12
This is another ongoing MNPS project to help control invasive weeds. The annual Ninepipe National Wildlife Refuge purple loosestrife pullout is held in conjunction with the Audubon Society. Be prepared to wade in the potholes! Call Neal Brown, 837-5018 for instructions.

ANNUAL FALL CANOE TRIP, SEPTEMBER
Planning is underway by the Flathead Chapter for the annual fall canoe trip; details will be announced in the next mailing.

HOWELLLA HUNTERS TAKE NOTE

Here's a timely poem for the blooming (and keying) season. I don't know who wrote it, it was passed on to me several years ago and is best read after several hours laboring over a dissecting scope with an unidentified member of the Poaceae.

THE IDENTIFICATION OF GRASSES
A grass can by "glumey" in more ways than one
When its classification remains to be done:
You pull off the parts, and soon feel your age
Chasing them over the microscope stage!

You peer through the lenses at all of the bracts
And hope your decisions agree with the facts;
While your oculist chortles with avid delight
As you strain both your eyes in the dim table light.

You are left on the horns of quite a dilemma
When you count the nerves on the back of the lemma:
Then you really get snoopy and turn each one inside
To see if the flower is sterile or infertile.

And then the compression - no problem is meaner -
Is it flat like your wallet or round like a wiener?
"How simple," you think, "for a mind that is keen."
But what do you do when it's halfway between?

You probe and you guess how the florets will shatter,
For you know later on it is certain to matter,
You long for the calmness of labor that's manual
When the question arises: "Perennial or annual?"

And that terrible texture, the meanest of all,
Is one of the pitfalls in which you can fall:
"Cartilaginous" maybe - or is it "chartaceous" -
Has even the experts exclaiming "Good gracious!"

Then you wail as you wade through the long tribal key,
"Oh, why must this awful thing happen to me?"
"Grasses are easy," our teacher declares...
As he mops off a brow
that is crowned with gray hairs!
C R P – ANOTHER PERSPECTIVE

I had an opportunity to read Peter Lesica's article on CRP (which begins on Page One), prior to publication. I think Peter brings up some valid points and some questions that a lot of people are asking. I hope, with this article, to be answer some of those questions.

I am employed by the Natural Resource Conservation Service (NRCS), formerly the Soil Conservation Service. My comments are strictly mine and do not necessarily represent the NRCS agency.

One issue that needs to be addressed is regarding the non-native plants that were planted in CRP. I can only speak for Sheridan County, where I had some CRP responsibility from 1989 to 1994.

The main objective of CRP was to take cropland out of production and establish permanent cover for erosion control throughout the ten-year contract. Introduced and native species met the intent of the law. Sheridan County had [at the time] the largest number of acres in CRP in Montana. After looking back into the records and visiting with some of the farmers, it became quite clear that a lot of the CRP acres started out in a native mix of western wheatgrass, slender wheatgrass, green needlegrass and alfalfa.

We should remember that soon after the CRP came along, we experienced a severe drought where precipitation for the area went from 15" per year to as low as 7" per year during a ten-year period. Also, when it became apparent that selling grass seed could be a lucrative crop, the prices went up dramatically. We should also remember that this soil on which we were trying to grow a "climax" set of plants had been depleted of nutrients and organic matter due to cropping practices. I just don't know how you can get a climax plant community to grow with depleted soil and no moisture. But the farmers tried it at first, even though the price was high, because they felt that they wanted to do the right thing.

Needless to say, about 90% of these native plantings failed. You can imagine attempting to talk a farmer into planting the expensive seed again on failed ground. A note should be made here to indicate that the native seedings were given three years to establish (two seedlings per square foot), whereas the introduced seedings were given two years to establish. NRCS tried to give the natives the benefit of slow germination. When the farmers were required to reseed, they opted for introduced, relatively inexpensive seed.

I strong feel that although we know some things about native grass seed, there is still room for more research. The introduced grasses appear to have been more researched than the native grasses.

The farmers were asked what their plans were after the ten year contracts expired. If they said they wanted early spring grazing and a field visit showed the slopes were not too steep, crested wheatgrass was planted. We have to remember that the farmer owns the land and makes the final decision; NRCS can only make suggestions. Economics played a major role in the farmer's decisions.

<<<CONSERVATION BULLETS>>>>>...continued from Page Three:

WAR ON WEEDS

The Natural Resources Conservation Service, Gallatin Weed Board, Gallatin County Conservation District, and Gallatin County Extension Service are sponsoring "War on Weeds," a workshop on noxious weeds and who's responsible for dealing with them once they get established. It will include identification of noxious weeds, difficulties presented by construction sites and new roads, and weed control options and effects.

The workshop is scheduled from 9am to noon on Monday, April 10, at the Grantree Inn balloon in Bozeman. Limited seating is available, and reservations must be made by calling 597-6929 by April 6. A complementary lunch will follow the session, and there will be a weed quiz and door prizes.

PLANT DIVERSITY LOSS THREATENS INDUSTRY

World population growth, environmental destruction, and modern farming practices threaten thousands of native plant species with extiction, a United Nations agency said in a recent report.

The loss of diversity in the world's plant species has implications for global agriculture and other industries that rely on plant materials, such as medicine, said officials of the Food and Agriculture Organization (FAO). The earth's plant genetic resources are a limited and perishable natural resource, and their loss constitutes a grave threat to our world food security," said Edouard Saouma, FAO director general.

As many as 40,000 plant species, out of many millions on the globe, could be extinct by the middle of the 21st Century unless conservation measures are immediately heightened, the FAO said. Today's disruption of the plants' ecological equilibrium is taking place so quickly, and human population growth is so massive, that nature does not have time biologically to cope.

Industrialized nations have the resources to protect their own plant genetics, FAO said, but world experts believe developing nations need at least $300-500 million a year to help their efforts. The world's genetic diversity is concentrated in tropical and subtropical areas, where most developing countries are located.

"New breeds of plants and animals will be needed to adapt to climatic and technological changes," Saouma said. "Today's desirable gene pool may not be the ideal gene pool of tomorrow. This calls for intensified efforts in the area of genetic resources conservation and utilization."

– Excerpted from the "Science and Health" section of the Helena Independent Record
March 24, 1992

FRIENDS OF THE UM HERBARIUM

The Herbarium at the University of Montana is an irreplaceable resource for the study of the botany and plant ecology of Montana. Although a collections manager has recently been hired to oversee herbarium activities, there is still a shortage of cabinets and space to house them, as well as a lack of funding to hire work-study students to mount and file specimens.

In these difficult times the UM Herbarium could use some friends. A group of concerned botanists and lay persons is founding the Friends of the University of Montana Herbarium. The mission of Friends of the UM Herbarium is to secure support for and enrichment of the collections and operation of the Herbarium.

If you are interested in joining the Friends, write for a membership application: Dave Dyer, Herbarium, Division of Biological Sciences, University of Montana, Missoula MT 59812.
In the past ten years there has been a small decline in the amount of cropland in Montana (see Figure 1) due mainly to the 1985 Food Security Act and the associated Conservation Reserve Program (CRP). CRP pays farmers (about $35/acre/year in Montana) to put their marginal and erodible croplands into perennial vegetation. There are approximately 2.8 million acres of land in Montana enrolled in the CRP program. In addition to saving an estimated 13 tons of soil per acre each year, CRP lands have been shown to be superior habitat for waterfowl, upland game birds and even some songbirds when compared to the croplands they replaced. As a result, the Montana Department of Fish Wildlife and Parks as well as many conservation organizations, such as Ducks Unlimited and the Soil and Water Conservation Society, support the CRP program. When compared to cropland, CRP land looks pretty good – but is this the right comparison?

![Figure 1. Cropland in Montana](image)

There is evidence that the CRP program has encouraged the loss of native prairie in Montana. The program allowed farmers to break up native prairie and put it into crops at the same time that they enrolled cropland in CRP and planted it to grass. These farmers maintained their crop production while getting additional income provided by CRP. The net result was a loss of native prairie and an increase in CRP plantings. Of course the majority of farmers enrolled in the program did not do any sodbusting, but the problem is still very real. A study conducted by the U.S. Fish and Wildlife Service in five Highline counties found that nearly 57,000 acres (89 square miles) of native prairie were broken in 1987-89 and that one-third of the sodbusting farmers were enrolled in the CRP program. Three of six SCS district conservationists interviewed stated that loss of native prairie associated with the CRP program was common in their area, and four of six stated that the problem was significant.

Proponents of CRP would argue that far more land is being put back into grass than is being broken. This is certainly true; however, less than 6% of CRP land in Montana was planted to native species. The majority of CRP plantings are crested wheatgrass or other exotic grasses, sometimes mixed with introduced legumes such as sweetclover or alfalfa. These plantings have far fewer species of plants, insects, birds and mammals than native prairie. Our native grassland communities display an intricate web of species and processes such as nitrogen fixation that build soil and retain high productivity. Simplified exotic pastures do not share this long-term sustainability, especially in areas with poorly developed or highly erodible soils. Moreover, exotic species such as crested wheatgrass resist re-invasion by native species from adjacent prairie. Many plantings from the 1930s are still dominated by crested wheatgrass with few native species present. It may take centuries before these non-native pastures begin to approach native prairie in composition.

This is not to say that the CRP program is all bad. Returning marginal cropland to perennial vegetation is a good idea, but concomitant sodbusting should be prohibited, and reclaimed cropland should be seeded to natives. Other government programs, such as farm subsidies, may be equally responsible for loss of native prairie by encouraging crop production on marginal land where unsubsidized agriculture would be unprofitable.

One thing is clear: the value of native grasslands is not adequately appreciated by those who make and administer agricultural policy on the Great Plains. SCS can and should be a strong proponent of native grasslands and native plantings. They and other government agencies should be discouraging sodbusting and encouraging farmers and ranchers to restore marginal croplands to native prairie rather than exotics such as crested wheatgrass. Over 70% of CRP lands in eastern Colorado were planted to native species through the efforts of the state and local SCS offices. SCS in Montana could have done the same. Our native prairies are every bit as wonderful as old-growth forests or mountain meadows. It's important to realize and appreciate what we have before it's too late.

Additional readings:
Books, D. 1994. CRP at the crossroads: the good old days are here, but can we keep them. Montana Outdoors 25(3): 2-7.
ANNOUNCEMENTS, continued:

SPECIAL APPRECIATION AWARD

The Board of Directors, on behalf of MNPS, presented Don Heinze with the 1995 Special Appreciation Award at the Board meeting in February. Normally the award presentation is part of our annual meeting, but Don may be leaving the state before that date.

Don has served as Artemisia chapter president since its beginning in 1992. He has always been an enthusiastic leader and worked hard to organize last year's annual meeting in the Pryors. He is retiring from his position as botanist for the state BLM. His territory covered 8.3 million acres in Montana, North Dakota and portions of South Dakota.

As part of the award he received a handmade willow basket by Karen Reinhardt and the Jepson Manual of Higher Plants for California - a book he has coveted for his personal library! Don and his wife Linda are moving to Grants Pass, Oregon, but plan to continue to attend our annual meetings. Thanks Don!

POSTER UPDATE

Treasuring Montana's Rare Wildflowers, the Montana Native Plant Society poster, is still available in limited supply. Each chapter has copies that will be available free, one per member. We cannot guarantee availability past the Annual Meeting, June 23-25. Members who are not affiliated with a chapter should either contact their regional representative (see Page 11) about prospects for picking one up, or plan on attending chapter or Annual Meeting events.

We do not have a budget for mailing copies. Any out-of-state member interested in ordering a copy should send a $6.00 check to cover the cost of the mailing tube and postage (make check to MNPS-Kelsey Chapter) and send to: MNPS-Kelsey Chapter, 1501 Butte Avenue, Helena, MT -- before the Annual Meeting date.

Non-members are instructed to contact the nearest office of the U.S. Forest Service or Bureau of Land Management for copies that are available free to the public (available while supply lasts).

CALLING ALL BOTANY CONSULTANTS

Montana Natural Heritage Program is preparing a referral list of experienced consultants for botanical work in Montana. This is spurred by the number of queries about experienced consultants directed to the Program and to other agencies and organizations, without there being a compiled list beyond the realm of any one person's sphere of contacts.

Please send business name and address c/o Bonnie Heidel, Montana Natural Heritage Program 1515 E 6th Ave, Helena, MT 59620. The compilation will be printed in an upcoming newsletter.

NEW BOOK

The Natural Habitat Garden
Ken Druse
Clarkson Potter/Publishers
256 pages, $40 hardcover

The Natural Habitat Garden, by award-winning author/photographer Ken Druse, with New York Newsday garden editor Margaret Roach, shows how gardens can be more than collections of plants; they can be harmonious communities made to resemble North America as it was in the years before European settlement.

According to Druse, "Now instead of just making gardens that resemble the earth, I want to change the earth's diminished domain by growing native-plant gardens modeled on nature's original communities.... The simplest wildflower meadow is more botanically varied than a basic grass lawn and offers a long season of pollens, seeds, nectars, nesting sites, and shelters for a wide variety of animals."

The book presents more than 500 color photographs of gardens from all over the country that are inspired by regional habitat types. It is divided into chapters on Grasslands, Drylands, Wetlands, and Woodlands.

Included is a detailed source guide and propagation primer; a section on integrated pest management; a state by state listing of nurseries, native plant societies, and places to visit; and a list of suggested readings.

The Natural Habitat Garden shows how we need to garden and landscape according to habitat in order to help offset the loss of the earth's vanishing biological diversity. "Once nature's wrinkles come to be seen as opportunities instead of problems to eliminate," concludes Druse, "a whole new flora and fauna can begin to unfold. This kind of leap forward in landscaping styles and plant selection can actually help offset the losses of habitat elsewhere on the planet. Global preservation efforts in the world's hotspots will continue to be more critical with every passing day; here is something else every gardener can do in his or her own backyard to help make a difference."

The main weakness of the book, from the perspective of those of us in the montane parts of Montana, is that none of the research or photography was done in the Rocky Mountain states (Montana, Wyoming, Idaho, Wyoming, Colorado or New Mexico). But the general approach suggested, and the rationale behind the book as a whole, should make it worthwhile reading.

PLEASE WELCOME THESE NEW MEMBERS:

MONTANA

Biddle
Margaret Scales
Bozeman
Jennifer Birdsall
Hans Consor
Eric R Lichtwardt
Judy McCarthy
Charmaine Richard
Christian Lee Finn Scott
Vicky York
Butte
Grant & Kim Mitman
Choteau
Lisa & Tom Flowers
Circle
Carla Lawrence
Florence
Shannon Kimball
Helena
Jim Cancroft &
Colleen Murphy
Steve Cooper
Joanne Knutson
Rae Ellen Lee

Kausspell
Judy Space
Miles City
Louise deMontigny
Savage
Joyce Eckhoff
Sidney
Ramona Raffall

Wisconsin
West Bend
Christine E Wichmann
ATTENTION MNPS
Creek
as part
considered "eastern"
who has not renewed by the time the Summer KELSEYA is ready
First of
year. New-member applications processed
VALLEY
-
-
-
our
representative,
and SW
areas
Continental Divide,
change
CLASS OF MEMBERSHIP
up
Montana
regions designated
covered
MAKE CHECKS PAYABLE
TO: MONTANA NATIVE PLANT SOCIETY
MAIL TO: Montana Native Plant Society/Membership
P O Box 8783
Missoula MT 59807-8783

ATTENTION MNPS STATE MEMBERS!!
The MNPS Board recently voted to
change the boundaries of the territories
covered by the Eastern and Western State
Representatives. Rather than follow the
Continental Divide, the Board decided to be
more floristically sensitive and follow the
regions designated for plant distribution
in Robert Dorn's Vascular Plants of Montana.

On the accompanying map, the hatched
areas show counties that MNPS formerly
considered "eastern" and is now considering
as part of our "western" territory. Dorn's NW
and SW regions make up our western
Montana territory, covered by our western
representative, Dennis Nicholls of Trout
Creek (827-4028).

Dorn's NC, SC, NE, and SE regions make
up our eastern Montana territory, covered by
our eastern representative, Terry Wamsley
of Harlem (353-2709).

From: R A Dorn, Vascular Plants of Montana, Mountain West Publishing, 1984
MONTANA NATIVE PLANT SOCIETY
The Montana Native Plant Society is a 501-C-3 (non-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, or may be made to the general 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 one- or two-line "bio" sketch 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, Attn: Calendar, P O Box 992, Bozeman MT 59771-0992; articles should be sent to Terry Wamsley, P O Box 1304, Harlem MT 59526. All items should be typed or on disk - prefer 3.5" - in WordPerfect 4.2 or better, or in a generic ASCII file.

Changes of address and inquiries about membership in MNPS should be sent to MNPS, Attn: Membership, P O Box 8783, Missoula MT 59807-8783. General correspondence should also be sent to the Missoula address.

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 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 mid-October '95. The Summer issue of KELSEYA will be mailed the last week of June. There will be a separate field trip mailing in early May - deadline for additional field trip info is APRIL 15.

IF YOU MOVE, PLEASE SEND US YOUR CHANGE OF ADDRESS

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