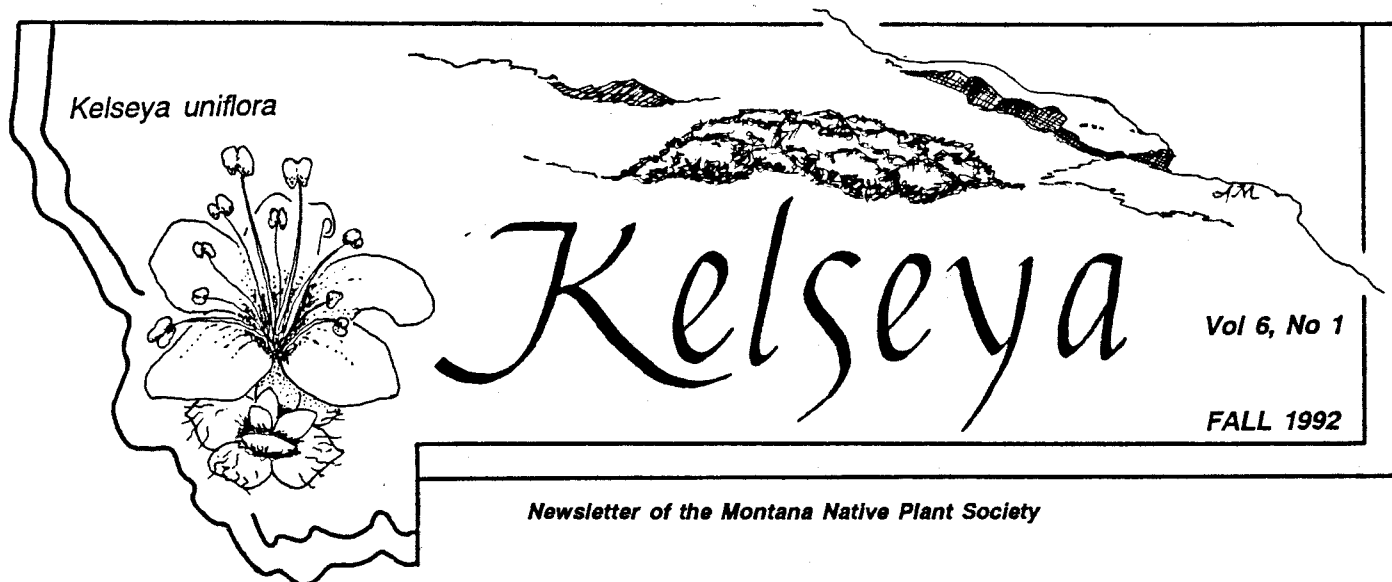




New RNAs Established...

THIRTEEN NEW RESEARCH NATURAL AREAS ADD 9499 ACRES TO NORTHERN REGION RNA SYSTEM

- Angela Evenden

NEWLY-DESIGNATED RESEARCH NATURAL AREAS in REGION ONE

**BITTERROOT
NATIONAL FOREST**
Bitterroot Mountain Snow
Avalanche RNA
Bitterroot River RNA
Lower Lost Horse Canyon
RNA
Sawmill Creek RNA
Upper Lost Horse Canyon
RNA

**CLEARWATER
NATIONAL FOREST**
Grave Peak RNA

**CUSTER
NATIONAL FOREST**
Sheyenne Springs RNA

**FLATHEAD
NATIONAL FOREST**
East Shore RNA
Little Bitterroot RNA
Tuchuck RNA

**KOOTENAI
NATIONAL FOREST**
Hoskins Lake RNA
Pete Creek Meadows RNA
Wolf-Weigel RNA

Regional Forester David F Jolly has announced the establishment of thirteen new Research Natural Areas (RNAs) in the National Forest of the Northern Region, encompassing a total of 9,499 acres. With the addition of these new areas, the Northern Region now manages 60 RNAs, totaling 49,724 acres, within Montana, Idaho and North Dakota.

The new RNAs are in the Bitterroot National Forest, Flathead National Forest and Kootenai National Forest of western Montana [see sidebar], the Clearwater National Forest in northern Idaho, and the Custer National Forest in North Dakota.

The first Northern Region RNA was established in 1935: Tepee Creek RNA (746 acres) on the Kaniksu National Forest (now the Idaho Panhandle NF) in Northern Idaho.

Dr Angela Evenden, Northern Region Natural Areas Program Manager, explains that the goal of Research Natural Area designation "is to protect a representative array of all significant natural ecosystems and their inherent processes as baseline ecological areas." The Forest Service, along with other federal land management agencies, participates in the establishment of a national network of Research Natural Areas through identification and designation of individual RNAs on National Forests. A diversity of terrestrial and aquatic ecosystems are represented within Northern Region RNAs, including: forests, grasslands, shrublands, bogs, riparian, wetlands and alpine. In addition, special features such as unique geological formations and habitat for rare plants and animals are also represented within RNAs.

RNAs are maintained in as near a natural state as possible. Evenden explains that "RNAs provide monitoring and research areas for long-term ecological studies which contribute to a better understanding of ecosystem structure, function and composition. Ecological information obtained from RNAs, and other ecological areas, is useful in guiding land management activities within an overall framework of ecosystem management and long-term ecosystem sustainability." Long-term ecological studies and research have been initiated in a number of RNAs in Montana and Idaho. This research is being conducted by Forest Service and university scientists.

Although RNAs are often small in size, they serve as reservoirs of biological

- continued on Page Six

From the President

Once again the autumn colors are flourishing on our beautiful Montana landscapes. Even from downtown Missoula, one can see the golden hue of alpine larch (*Larix lyallii*) high on Carlton Ridge south of town. With fall comes the transition from field to office, at which time I catch up on all those projects that got put off during the summer months – such as reporting on last spring's annual meeting.

1992 Spring Meeting

Valley of the Flowers Chapter hosted the 5th Annual Spring Meeting of MNPS, which featured Natural Areas of the Greater Yellowstone. The Chapter really outdid themselves with an excellent and full agenda of speakers and field trips, and wonderful social events. The wind and cheese social on Friday night, and Greg Keeler's dinner entertainment on Saturday were unprecedented! Forest Service Regional Ecologist Wendel Hann provided the keynote address on "The Dynamics of Preserving Biodiversity." We had natural areas presentations from the Bureau of Land Management, US Fish & Wildlife Service, Montana Natural Heritage Program, Department of State Lands, and US Forest Service. The Silent Auction was, once again, a big success – bringing in over \$300. Many thanks to all who contributed. Among other things, I brought home a nice pot full of bunchberry (*Cornus canadensis*) which is now growing slowly in my yard.

New Officers

The 1992-93 officers were installed at the Annual Meeting: Linda Iverson as Vice-President, and Dana Field as Secretary. Congratulations to you both, as well as many thanks for your willingness to continue helping the Society. Linda Iverson was also presented with a Certificate of Appreciation from the Board of Directors for her work on the *Native Plant Source Guide*.

Fall Board Meeting

The Fall Board of Directors' meeting is scheduled for Saturday, October 24, in Missoula. We will be meeting at my house from 10 am to around 3 pm. If any member has items or issues that you would like the Board to address, please let me know. Call me at 329-3485 for directions to the meeting, or with agenda items.

New Chapter in Billings

I am also pleased to announce that a new chapter has been formed in Billings, serving the southcentral/southeastern part of the state. Don Heinze, Chapter President, reports that they have already been busy with several field trips and meetings this summer. At their July meeting, the group decided on the name **Artemisia Chapter** – reflecting the dominant vegetation for much of the area they serve. We look forward to a more complete report on this new chapter and its activities in the next newsletter.

– Angela Evenden

...<<<<<<<<<Conservation Bullets>>>>>>>>...

PLANT CONSERVATION RESOURCE BOOK AVAILABLE

The Center for Plant Conservation, based at the Missouri Botanical Garden in St Louis, Missouri, has just updated their publication listing individuals and organizations involved in conserving this country's native plants. The *1992 Plant Conservation Directory* is a comprehensive listing of over 500 professionals and offices involved in such efforts, and summarizes state plant conservation laws. Contents include:

- * Federal and state government contacts at the resource level who can provide information about rare and endangered plants, permitting procedures and government programs;
- * Botanists and other contacts in state Heritage Programs, Native Plant Societies, and others in national private organizations working on plant conservation;
- * Rare plant laws by state;
- * Sources for obtaining state lists of rare and endangered plants;
- * Center for Plant Conservation contacts within each state.

To order, send check or money order for \$15 per copy (which includes postage) to: Center for Plant Conservation, Missouri Botanical Garden, P O Box 299, St Louis MO 63166. The Center would welcome your additional contributions to support its efforts to conserve rare and endangered plants in the United States, and will be happy to furnish information on request about its activities and member gardens.

Montana Recycling Hotline ** 1-800-823-MEIC

Toll-free number for information on what/where/how to recycle your household and office waste, hazardous waste, composting etc.

MONTANA CONSERVATION CORPS

The concept of the Montana Conservation Corps (MCC) is not new: the Civilian Conservation Corps of Depression years, the Peace Corps, VISTA – these are just a few of the programs that have become synonymous with the idealism of young adults and their need to contribute to the greater good of their community and country.

Programs such as MCC provide a two-fold benefit to society. Trails are built, natural resources are protected, trees planted, skills shared. But beyond these tangible benefits are the rewards for those who give. The young people who participate in such programs gain experience, work skills, discipline, education, broadened social interaction, and a feeling of self-worth and belonging. These attributes are essential for long-term individual success, self-sufficiency, and productive citizenship.

In late 1990 Congress passed a National and Community Services Act which has a specific section designed to develop and expand conservation corps across the country. Initially, funds were to be disbursed to the states for summer 1991, but the timetable for release of these funds has been moved to spring 1992. This legislation provides the primary funding source for MCC's program, and they will develop and implement a corpsmember education program, as well as train and support crew leaders and provide for the program's basic administrative structure.

Young people who participate in the program gain job skills and basic life skills, along with environmental education, related to the work site of the project they're involved in. The key to

– continued on next page

THAT'S WHY THEY CALL IT FALL

- Peter Lesica

Each autumn, deciduous trees and shrubs shed their leaves. In some years leaves are shed earlier than in others. In 1991, many of the trees in western and southern Montana - especially those in our towns - continued to hold their leaves much longer than usual. Why do trees shed their leaves, and what determines when they do it?

Leaves are the organs adapted for photosynthesis,

enabling plants to capture sunlight and turn this energy into sugars and other carbohydrates needed for growth. In much of North America winter is too cold for these functions, so most plants become dormant. Leaves serve no purpose when trees are dormant, and they may be a liability. Strong winds and heavy snow can put tremendous pressure on limbs that have leaves. Some of the worst tree breakage occurs during late spring

snowstorms when wet snow collects on trees that have already leafed out. Our conifers have small, durable leaves (needles) that can shed snow and survive the vagaries of winter without damage. Thus, most conifers keep their leaves for many years. However, for trees that produce thin, broad leaves, it's better to spend the winter naked and produce new leaves in the spring.

As autumn progresses, chlorophyll - the green pigment that captures light - is no longer produced; instead it is broken down. Leaves gradually change color, and nutrients are withdrawn and transferred to roots and stems. Buds for next year's growth ordinarily have already been formed, but now they become hardened. At the same time, enzymes digest the

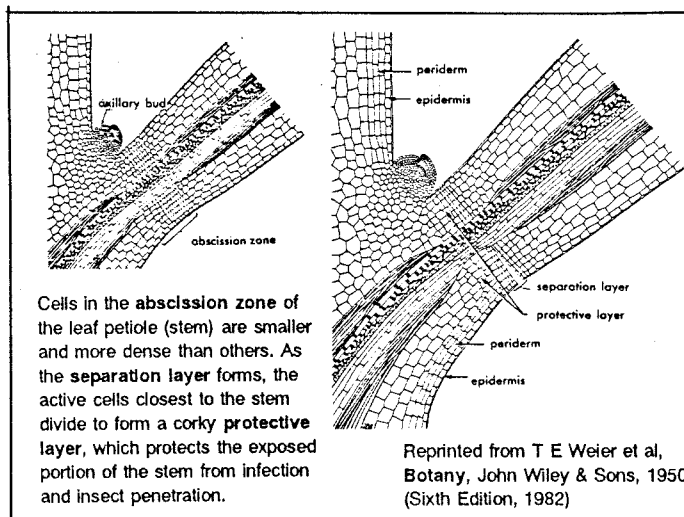
cells at the base of the leaf stalk, forming an *abscission layer* of weakened cells. When digestion is complete, the leaf falls.

Dormancy is brought on by a change in the levels of plant hormones, but the process is not understood very well. Short daylength is the most important environmental cue stimulating the onset of dormancy and leaf fall. This is clearly shown by the fact that in many cities the trees close to street lamps are

often the last to lose their leaves. Drought will also hasten the onset of leaf fall. Thus, following a dry spring and summer, trees shed their leaves early. On the other hand, superabundant water or hard pruning stimulate new growth, and vigorous growth delays the onset of dormancy. Watering trees too heavily in early fall or severe pruning may delay dormancy, and an early freeze could damage unhardened buds, causing poor growth the following spring.

In 1991, the wet spring and early summer weather stimulated growth and delayed the onset of leaf fall of many deciduous trees in

our state. In late October, before many of the trees had dropped their leaves, there was a prolonged period of abnormally cold weather. In some of the trees which still had green leaves, leaf tissue froze and was killed before sufficient enzymes were produced to cause abscission layers to form. As a result, many of our trees entered winter still carrying some of their leaves. In my neighborhood in Missoula, trees that have been pruned too hard in the last year or two still had almost all of their leaves, and were most at risk due to breakage from a severe winter storm. Unless the buds are damaged by near-zero temperatures, however, spring of '92 brought a normal flush of new leaves.



<<<CONSERVATION BULLETS>>>>>>

continued from Page Two

success, according to the MCC Newsletter (Vol 1, No 1), "rests in our ability to form partnerships with an incredibly wide variety of public and private interests."

Despite absence of a formal statewide program, the Human Resource Development Councils in Bozeman, Billings and Kalispell have implemented MCC for the past two summers, using JTPA summer youth employment funds and other resources to field MCC crews with local agencies. The Kalispell effort has an even lengthier history because they were a part of the original Department of Fish, Wildlife & Parks conservation corps pilot program. Crews have been involved with projects for ZOO Montana in Billings, trail maintenance and improvement in several locations, cleanup and maintenance at Headwaters State Park and various smaller campgrounds and fishing access sites, and a two-day trip to

Glacier Park that included both work and education presentations by the Park's interpretive staff, highlighted by a whitewater raft trip.

As Jeff Rupp, President of MCC Board of Directors, observes in the newsletter, "Unfortunately we spend very little time honestly looking at our young people as a genuine asset. When we do this, we see that they are energetic, creative, imaginative and idealistic....Society needs what youth can contribute. Young people need the opportunity to make a contribution, to take on real responsibility, to make a difference in our state, and to experience being needed....To accomplish our conservation goals through the energy and idealism of youth provides an important new perspective."

- excerpted from **Montana Conservation Corps Newsletter**, 321 E Main, Suite 300 Bozeman MT 59715

MEETINGS

MONDAY, OCTOBER 5, ARTEMISIA CHAPTER: 7:30 pm, Bair Science Center, Rocky Mountain College campus, Billings. Speaker will be John Tucker of the Yellowstone Valley Audubon chapter, who will show a selection of his many wildflower slides.

WEDNESDAY, OCTOBER 7, VALLEY OF THE FLOWERS CHAPTER: 7:30 pm, at the loft of the Plant Growth Center, MSU campus, Bozeman. Bring 6-10 slides of neat plants you saw this summer, or neat places you visited, to share.

THURSDAY, OCTOBER 8, CLARK FORK CHAPTER: 7:30 pm, Room 307, Natural Science Bldg, UM campus. Larry Evans, a local mycologist, will talk about and show slides of "Common Edible and Poisonous Mushrooms of Western Montana." There will be a field trip on the following Saturday (see below).

WEDNESDAY, OCTOBER 21, FLATHEAD CHAPTER: 7 pm, Fish, Wildlife & Parks Bldg, Kalispell. This is our kickoff evening meeting of the year. It's "potluck" - bring slides of spring flowers and summer adventures!

SATURDAY, OCTOBER 24, BOARD OF DIRECTORS' MEETING: 10 am at Angela Evenden's home, Missoula. Brownbag lunch. See *From the President* for more details.

SATURDAY, OCTOBER 31, KAGY HILL WORK DAY: See *Announcements* for details.

MONDAY, NOVEMBER 2, ARTEMISIA CHAPTER: 7:30 pm, Bair Science Center, Rocky Mountain College, Billings. Steve Wolfe, professor of botany and curator of the herbarium at RMC, will present a slide show.

WEDNESDAY-THURSDAY, NOVEMBER 4-5, NATURAL AREAS CONFERENCE: See *Announcements* for full details.

WEDNESDAY, NOVEMBER 4, VALLEY OF THE FLOWERS CHAPTER: 7:30 pm, loft of the Plant Growth Center, MSU campus, Bozeman. Program TBA.

THURSDAY, NOVEMBER 12, CLARK FORK CHAPTER: 7:30 pm, Rm 307, Natural Science Bldg, UM campus. Peter Lesica will take us to warmer climes when he shows slides on "The Flora and Vegetation of the Hawaiian Islands."

WEDNESDAY, NOVEMBER 18, FLATHEAD CHAPTER: 7 pm, Fish, Wildlife & Parks Bldg, Kalispell. Program TBA.

WEDNESDAY, DECEMBER 2, VALLEY OF THE FLOWERS CHAPTER: 7:30 pm, loft of the Plant Growth Center, MSU campus, Bozeman. Program TBA. Please note, there will be NO meeting in January!

MONDAY, DECEMBER 7, ARTEMISIA CHAPTER: 7:30 pm, Bair Science Center, Rocky Mountain College, Billings. Slide show presentation by Jennifer Lyman.

THURSDAY, DECEMBER 10, CLARK FORK CHAPTER: 6:30 pm, the Annual Christmas Potluck Supper will be held at the home of Dorothy and Don Fawcett, 1224 Lincoln, in the Rattlesnake. Bring a salad, main dish or dessert and a few of your favorite slides from the past year. Call Dorothy at 549-1415.

MONDAY, JANUARY 4, ARTEMISIA CHAPTER: 7:30 pm, Bair Science Center, Rocky Mountain College, Billings. Judy McCarthy will present a talk and slide show on tropical plants.

...and planning ahead:

ALPINE WILDFLOWERS AT HOME

The 1993 MNPS State Meeting (hosted by the Clark Fork Chapter) will be held in the Gravelly Range south of Ennis or Sheridan, on July 23-25, 1993. Watch for details in the next issue of *KELSEYA*.



FIELD TRIPS

COMMON MUSHROOMS OF WESTERN MONTANA, SATURDAY OCTOBER 10: Larry Evans will guide us through the wonderful world of slime molds, rusts and fungi. Meet at 9:30 am in the parking lot in front of Adams Fieldhouse, UofM Campus. Bring a lunch; we'll travel to a nearby forest area to see what we can find.



FIELD TRIP REPORTS

WEST BOULDER: WETLANDS TO LIMESTONE CLIFFS

On June 6 a good-sized group hiked along a plateau above the West Boulder River south of Big Timber. The group consisted of residents of the valley and nearby, plus some visitors from far-off places like San Francisco and New Jersey. We were delighted to have along a *bona fide* reporter whose own version of this walk aired recently on public radio's "High Plains News Service."

Part of our trip passed through the same area our "horseback botany" trip took us in 1990. This time we were able to get more of a close-up look at the plant life. Jan Nixon served as our trip leader.

One feature we had not stopped to examine before was a series of rock ledges below "Broker's Point" (Tom MacNamee's designation for an unnamed topographic feature). Plants were growing out of every crack and crevice of the limestone, a true rock garden. A small Mustard-family member, *Draba*, was the classic mat-forming plant found there, along with *Sedums*. Wind-twisted junipers and limber pines also found toe-holds among the ledges. A natural staircase through the center provided easy access on up the slope.

The view from Broker's Point was spectacular. Growing on the clifftops were *Cryptogramma crispa* (rockbrake fern), *Lewisia rediviva* (bitterroot) in bud, and *Saxifraga rhomboidea* (diamond-leaf saxifrage). Jan even clued us in on how the first-year leaves of *Frasera speciosa* (Deer-tongue gentian) smell like bacon fat, something we would never have noticed by ourselves.

On the way down we passed by thickets of *Physocarpus malvaceus* (Mallow ninebark), then just in bud. With all the cool weather this fall, it is turning a beautiful scarlet now, not unlike the *Rhus trilobata* (skunkbush sumac), found at lower elevations.

Even with this year's early spring, we were not disappointed by the array of flowers still blooming.

- Linda Iverson

ANNOUNCEMENTS

1992 NATURAL AREAS CONFERENCE

The Montana Interagency Natural Areas Committee is hosting the 1992 Natural Areas Conference in Lewistown on November 4-5. The theme of the conference is on Natural Areas of eastern Montana. A general session will be held on November 4 featuring presentations by private, state and federal natural areas managers. Technical working groups will meet on the morning of November 5. If interested in receiving more information about the conference, contact Angela Evenden, (406) 329-3485, at the Forestry Sciences Lab, or write P O Box 8089, Missoula MT 59807.

KAGY HILL WORK DAY, SATURDAY OCTOBER 31

Valley of the Flowers Chapter has scheduled a fall work day at the Kagy Blvd road cut in Bozeman, where we have been attempting to revegetate the road cut and ameliorate erosion for the past couple of years. This year we're considering establishing chunks of Idaho fescue sod across the worst gullies, as well as planting the remainder of the grass and forbs seed purchased last year.

Meet at 10 am at the road cut on Kagy just east of Church St/Sourdough Rd. Bring a shovel, pick or spading fork, if possible, and gloves. If you have native plant seeds you'd like to donate, they'd be welcome. Call Sharon Eversman, 994-2473, for info.

AMERICAN HORTICULTURAL SOCIETY SYMPOSIUM CALL FOR PAPERS

The American Horticultural Society, in collaboration with the American Horticultural Therapy Association, Brooklyn Botanic Garden, National Gardening Association and the New York Botanical Garden, has scheduled a symposium, "Children, Plants and Gardens: Educational Opportunities" at the National 4-H Conference Center, Washington DC.

They are soliciting papers and presentations (including training workshops and posters) on such topics as interdisciplinary educational opportunities using plants and gardens; science and

environmental education through gardening; art, design, and plant selection for children's gardens; examples of dynamic school gardens - urban, suburban, rural; creative and dynamic field trips for children to public gardens and arboreta, to name only a few.

For a copy of the Call for Papers and submission forms, write or call: Maureen Heffernan, Education Coordinator, American Horticultural Society, 7931 E Boulevard Drive, Alexandria VA 22308; (703) 768-5700; FAX (703) 765-6032.

WILDFLOWER SEED AVAILABLE FROM NEW ENGLAND WILD FLOWER SOCIETY

For gardeners looking for wildflowers to enhance their home landscape, the New England Wild Flower Society offers seeds or spores of over 200 varieties of wildflowers and ferns in their 1993 *Seed and Book Catalogue*. Included in the *Catalogue* are natives for woodland, wetland, and meadow gardens. Early blooming wildflowers add color to spring shade gardens while many of the sun-loving varieties are vibrant splashes in summer borders. Once established these perennial wildflowers bloom for many years.

The wide choice of seeds offers novice to experienced gardeners an economical way to obtain wildflowers for their garden and an opportunity to grow native plants not usually available from nurseries. For people trying for the first time to germinate wildflowers from seed there are many easy-to-grow varieties such as wild columbine (*Aquilegia canadensis*), butterfly weed (*Asclepias tuberosa*), and cardinal flower (*Lobelia cardinalis*). More experienced gardeners might want to try ferns, gentians, pitcher plants, or native species of rhododendrons.

All requests for the 1993 *Seed and Book Catalogue* must be received by March 1, 1993, because seed sales close March 15. Requests will be filled in the order received. The *Catalogue* is an adjunct of the society's world-wide seed distribution effort.

Send \$2.00 and a self-addressed #10 (business size) envelope with 52 cents in stamps affixed to: Seeds, New England Wild Flower Society, Garden in the Woods, Hemenway Rd, Framingham MA 01701. No requests for a *Catalogue* will be honored without the stamped envelope.

GRANT FOR A NATIVE PLANT STUDY GARDEN

The town of Broadview, Montana, may occupy only two pages in the phone book, but the efforts of the hard-working people there have had some amazing results. Farmer and native-plant enthusiast Bill Brinkel and Yellowstone Conservation District Administrator LaVerne Ivie have worked together to obtain a grant for the Broadview School to create a native garden, located at the Broadview Community Center, as an open classroom.

Broadview School personnel presented their ideas to the Yellowstone Conservation District Board. The Board in turn made recommendations and submitted a proposal to the Department of Natural Resources and Conservation for a \$500 mini-grant, which must be matched by school district funds or in-kind donations. A contract was signed between the DNRC and the District.

The Conservation District will oversee the project, which consists of a landscape plan donated by Linda Iverson from Big Timber, vice president of MNPS. Bill used the Plant Society's *Native Plant Source Guide* to help locate seeds and plants. The local Lions' Club donated preliminary landscape work by building

a three-tier planting bed. Volunteers from the community assisted the school teachers with planting seeds in containers in the elementary classrooms, and the Conservation District helped them plant at the site. The garden will be used by the teachers in their range plant curriculum.

A recent report from Laverne was very exciting. Many of the seeds germinated and the garden is really growing. Local volunteers help keep it weeded and watered.

Future plans include the Broadview Shop Class making signs identifying the plants, and the Lions' Club is planning a brochure with a picture of the planting.

Anyone interested in the Grant Program for projects in water quality, land use and resource conservation can contact: Frank Mastandrea, Conservation Districts Bureau, Department of Natural Resources and Conservation, 1520 E 6th Av, Helena MT 59620, 444-6672. Or you may contact Laverne Ivie at the Yellowstone Conservation District, 1629 Avenue D, Bldg B #2, Billings MT 59102, 657-6527.

- Linda Iverson

NEW RNAs, continued from Page One:

diversity, in particular for small organisms such as invertebrates, small mammals and plants. Some RNAs protect significant habitat for rare vascular and nonvascular plants. RNAs are often bounded by intensively managed and harvested landscapes. In these cases, RNAs may serve as an important source of native organisms for recolonization on adjacent sites, as succession proceeds after disturbance.

"Although RNAs are managed primarily as ecological and scientific reference areas," says Evenden, "they also provide an important education tool for the public. Local educational institutions and other interested public groups conduct field trips or sponsor additional studies in the various areas."

Bitterroot National Forest

Lost Horse Canyon, southwest of Hamilton MT, is the site of three newly established RNAs on the Darby District: Bitterroot Mountain Snow Avalanche RNA, Lower Lost Horse Canyon RNA, and Upper Lost Horse Canyon RNA. The canyon is a classic example of a glacier-carved valley, and together the three RNAs preserve representative segments of the canyon's distinctive geological and ecological features.

Bitterroot Mountain Snow Avalanche RNA (1758 acres) was established to protect a series of pronounced avalanche tracks located on a southern exposure. Avalanche tracks support unique plant communities, invaluable for many wildlife species including the threatened grizzly bear. The RNA provides a site for the study of these communities and their associated hydrologic features.

Lower Lost Horse Canyon RNA (1601 acres) occurs in the lower portion of Lost Horse Canyon. Moist forest dominated by western redcedar, grand fir, Engelmann spruce, and Pacific yew occur along the creek. Ponderosa Pine and Douglas-fir forests occupy lower slopes, while subalpine fir and whitebark pine dominate the uppermost slopes. **Upper Lost Horse Canyon RNA** (1720 acres), located at the upper end of the Lost Horse Creek drainage, includes the nine-acre Bailey Lake. It features subalpine forests, a portion of which burned in 1988. Major species include whitebark pine, Engelmann spruce, subalpine fir, alpine larch and lodgepole pine.

Two RNAs have also been recently designated on the Stevensville Ranger District of the Forest: Bitterroot River RNA and Sawmill Creek RNA.

Bitterroot River RNA (40 acres) is adjacent to the Bitterroot River. Riparian plant communities dominated by black cottonwood, ponderosa pine, willows and grasses cover most of the RNA. Undisturbed examples of riparian communities are increasingly rare due to their use for agriculture, livestock grazing and homesites. A portion of the river and unvegetated sandbars are included, providing opportunities for studying plant colonization and succession patterns.

Sawmill Creek RNA (270 acres) is located on the west slopes of the Sapphire Range. The primary feature is an extensive area of mountain grassland dominated by bluebunch wheatgrass, rough fescue and Idaho fescue. Slightly moister portions of the RNA support open forests of Douglas-fir and ponderosa pine.

Flathead National Forest

Recent establishment of three RNAs on the Flathead National Forest are the first on this Forest since Coram RNA (near Hungry Horse MT) was established for research purposes in 1937.

East Shore RNA (646 acres) is located two miles east of Flathead Lake near Bigfork MT, on the Swan Lake Ranger

District. A mixture of mature forest, numerous rock outcrops, and small wetlands characterizes the RNA. Forest range from dry Douglas-fir to moist western redcedar and grand fir forests.

Little Bitterroot RNA (200 acres) is a discrete tract of land managed by the Swan Lake Ranger District, encompassing a segment of the Little Bitterroot River flowing through a steep-walled canyon. Forests on the canyon slopes are dominated by Douglas-fir with an open understory of pinegrass. Two small lakes and talus slopes are included within the RNA.

Tuchuck RNA (2062 acres) is located within the North Fork Flathead River drainage on the Glacier View Ranger District. A variety of high-elevation subalpine and timberline forests are present. Major tree species are whitebark pine, alpine larch and subalpine fir. Much of the area burned in 1929 as, as a result, parts of the RNA remain shrub-covered. Several wet meadows add to the RNA's diversity.

Kootenai National Forest

The two recently-designated RNAs bring to five the number of established RNAs on the Kootenai NF.

Hoskins Lake RNA (360 acres) is located within the Purcell Mountains on the Three Rivers Ranger District in Lincoln County. The RNA features mature stands of Douglas-fir, western larch, Engelmann spruce and western redcedar. A lake, pond, and wetland are also included. Wildlife use of the general area is high, and whitetail deer, mule deer, elk, moose and waterfowl are frequent visitors.

Pete Creek Meadows RNA (155 acres) is an extreme northwestern Montana on the Three Rivers Ranger District. The RNA lies within the Purcell Mountains, and forms the headwaters of Pete Creek. Featured are a large, pristine wet meadow complex, and adjacent subalpine forests dominated by subalpine fir and Engelmann spruce.

Wolf-Weigel RNA (250 acres) is on the Fisher River Ranger District, 18 miles northeast of Libby, within the Salish Mountains. Occurring within the RNA are old-growth forests of subalpine fir, Engelmann spruce, western larch, and Douglas-fir. Of geological interest is a steep, narrow gorge and several waterfalls. A pond and wetlands are present, providing habitat for moose, whitetail deer, beaver and songbirds.

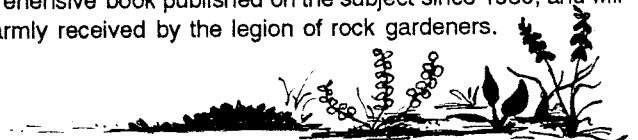
New Book...

The Propagation of Alpine Plants and Dwarf Bulbs

Brian Halliwell

Timber Press, Portland OR
1992, 294 pp, hardbound, \$24.95

The cultivation of alpine plants continues to grow in popularity, and this guide covers more than 1,000 genera suitable for rock gardens in temperate areas. Detailed descriptions of propagation methods are complemented by line drawings illustrating important points. Included are some rare and unexpected plants, as well as many new and recent introductions. This is the first comprehensive book published on the subject since 1950, and will be warmly received by the legion of rock gardeners.



MONTANA NATIVE PLANT SOCIETY *** MEMBERSHIP APPLICATION/RENEWAL

Date _____ New _____ Renewal _____

NAME _____ ADDRESS _____

CITY/STATE/ZIP _____ PHONE _____

STATEWIDE MEMBERSHIP WITH CHAPTER AFFILIATION*

- ___ \$12 I. Individual
- ___ 16 II. Family
- ___ 28 III. Business/Organization
- ___ 4 IV. Yearly chapter dues for Lifetime Members

MEMBER-AT-LARGE (Statewide membership only)

- ___ \$ 8 I. Individual
- ___ 12 II. Family
- ___ 25 III. Business/Organization
- ___ 150 IV. Lifetime member (one-time payment)

*AREAS COVERED BY CHAPTERS:

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

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

FLATHEAD CHAPTER - Flathead and Lake Counties plus Glacier National Park

KELSEY CHAPTER - Lewis & Clark and Jefferson Counties

VALLEY OF THE FLOWERS CHAPTER - Gallatin, Park, Madison and Sweet Grass Counties plus Yellowstone National Park

All MNPS chapters welcome members from areas other than those counties indicated - we've listed the counties just to give you some idea of what part of the state is served by each chapter. More chapters are in the planning stages for other areas; watch for announcements of meetings in your area. Ten paid members are required for a chapter to be eligible for acceptance in MNPS.

Membership in the MONTANA NATIVE PLANT SOCIETY is on a calendar-year basis, March 1 through the end of February of the following year. New-member applications processed before the end of June each year will expire the following February; those processed after the first of July will expire in February of the year after. Membership renewal notices are included in the Winter and Spring issues of KELSEYA. Anyone who has not renewed by the time the Summer edition of KELSEYA is ready to mail will be dropped from the mailing list/MNPS roster.

Your mailing label tells your

CLASS OF MEMBERSHIP (I, II, III, IV - see above)

CHAPTER AFFILIATION, if any (ART = Artemisia; CF = Clark Fork; F = Flathead; K = Kelsey; VoF = Valley of the Flowers)

DATE YOUR MEMBERSHIP EXPIRES: If your label reads "x2/92" your membership expired February 29, 1992...please send in your renewal today! New memberships received since July 1, 1992, are good through 2/28/94, and the top line of your label should read "2/94." Please drop us a note if any information on your label is incorrect.

MAKE CHECKS PAYABLE TO:

MONTANA NATIVE PLANT SOCIETY

MAIL TO: Montana Native Plant Society

P O Box 992

Bozeman MT 59771-0992

PLEASE WELCOME THESE NEW MEMBERS:

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Ken Sinay

BIGFORK
Renate M Good

BILLINGS
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DAYTON
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Marian Jean Setter

HELENA
Nancy Krigger

LIVINGSTON
Jim & Julie Sievers

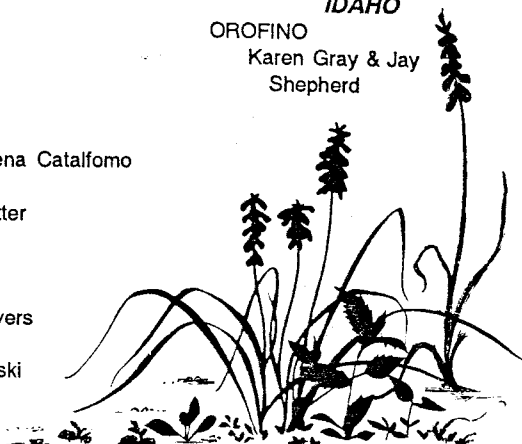
MISSOULA
Madeline Mazurski

NOXON
Deborah Boots

WHITEHALL
Todd Breitenfeldt

IDAHO

OROFINO
Karen Gray & Jay
Shepherd



VOLUNTEER HELP IS NEEDED ON WETLANDS ISSUES

Montana Audubon Council is looking for a few volunteers who could give two or more hours to help research wetlands issues in Helena at the Army Corps of Engineers' office. If you're interested in wetlands regulations and issues, this is a great way to learn.

Research is needed on the number of wetlands-altering permits, both granted and denied; the types of wetlands-altering permits granted; and details about wetlands-altering permits that have been denied or withdrawn.

If you would like to donate some time to research these issues, contact MAC at 443-3949, or write: Montana Audubon Council, P O Box 595, Helena MT 59624.

BIOLOGICAL CONTROL SUPPLIERS

The fourth edition of **Suppliers of Beneficial Organisms in North America** lists 60 companies that sell biological controls. Contact: Larry Bezark, California Dept of Food and Agriculture, Biological Control Services Program, 3288 Meadowview Rd, Sacramento CA 95832; telephone (916) 427-4590.

MONTANA NATIVE PLANT SOCIETY

KELSEYA Editor

P O Box 992

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PLEASE NOTE: If your label reads x2/92, your membership expired the end of February. If your label reads COMP or COMP2, this is your LAST FREE ISSUE. We don't want to lose you...won't you send in your check today?

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Peter Lesica

P O Box 8944

Missoula MT 59807-8944

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, cartoons or drawings - 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 done in black ink with a fine-point pen. If you send clippings, please note the source, volume/issue and date.

Changes of address and inquiries about membership in MNPS should be sent to MNPS, PO Box 992, Bozeman MT 59771-0992. All newsletter material should be mailed to Jan Nixon at the same address, and may be typed or on disk (either size) in WordPerfect 4.2 or better.

Advertising space is available in each issue at \$5/column inch. Ads must be camera-ready, and must meet the guidelines set by the Board of Directors for suitable subject matter: that is, be related in some way to plants or the interests of MNPS members.

Deadline for the Winter issue is DECEMBER 10; please include meeting/field trip notices through early April. The Winter issue of KELSEYA will be mailed the last week of December.



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Newsletter/Publications - Jan Nixon	Bozeman (wk)	587-0120

BOTANY NEWS FROM REGION ONE

Steve Shelly, Forest Service/Montana Natural Heritage Program Botanist, and Angela Evenden have gleaned the following tidbits from us from happenings in US Forest Service Region One in the past few months:

Dan Leavell has recently been hired as the Forest Botanist on the Kootenai NF in Libby. This brings to four the permanent botanists on National Forests in Montana. The other botanists are Maria Mantas, Flathead NF in Kalispell, Susan Rinehart, Deer Lodge NF in Deer Lodge, and Dana Field, Lewis & Clark NF in Great Falls.

The Region has also recently completed an electronic database linkage between the Forest Service computer system and the Montana Natural Heritage Program database, for data on threatened, endangered and sensitive plants. Previously the data was only available to the Forest Service in hard-copy form. The Region is emphasizing the development of conservation strategies (species management guides) for several Region One sensitive plant species. A final conservation strategy for *Howellia aquatilis* (water howellia) will be released in October of this year.

This summer, two new state record plants were confirmed on National Forests in Montana. Steve and Maria Mantas found *Liparis loeselii* (fan orchid) on the Flathead NF. This species is restricted to fan habitats in northwestern Montana. In June Steve located *Halimolobos perplexa* in the West Fork drainage of the Bitterroot River, on the Bitterroot NF. This species was formerly only known from the Salmon River drainage in Idaho.

*Halimolobos
perplexa*



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