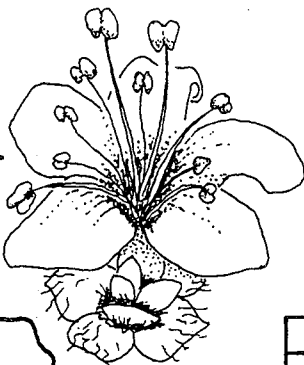


Kelseya uniflora



Kelseya

Vol 7, No 1
FALL 1993

Newsletter of the Montana Native Plant Society

FORESTS BENEATH YOUR FEET

– Sharon Eversman

An elementary school teacher once explained that on outdoor excursions she tells her classes of little ones to look at the plants and animals above their heads, everything between their head and their knees, and things below their knees. This essay will concentrate on the world below the ankles, at least in terms of overall size of the organisms. This puts one in the realm of nearly all the plants in alpine meadows and in the special world of mosses, lichens, and liverworts in all habitats. True, all of these small vegetational components may also dwell on trees, rocks, cliffs, buildings, and statues above one's head, but size-wise, they are individually usually less than ankle height.

As we all vividly recall from beginning botany classes, mosses and liverworts (hepatics) are true plants, with chlorophylls *a* and *b*, and storage of excess sugars as starch. Unlike the conifers and flowering plants, they have no vascular tissue (xylem and phloem) nor flowers, fruits or seeds. The longest-lasting stage of their life history is the familiar small green form, with chromosomes not in pairs (haploid) and able to obtain water and inorganic nutrients only by osmosis or direct absorption from substrate or atmosphere. This last characteristic, similar to that of lichens, is what makes them very sensitive to air pollution and useful for monitoring air quality. Lack of vascular tissue for support and conduction, and probably the dominance of the haploid stage, keep the plants small.

Mosses and leafy liverworts can be easily distinguished from algae and lichens: mosses and leafy liverworts have central stems to which small leaves are attached. Algae are usually filamentous, with no little leaves; lichens come in various shapes and colors, but never with stems and little leaves. The most common liverwort, *Marchantia polymorpha*, however is not leafy: it is a flat, porous liver-shaped thallus, that is most abundant in damp spots. After the fires in Yellowstone National Park, it was everywhere in the moister habitats. A "thallus" is the name given to plants like *Marchantia* and lichens that do not have the usual stem-leaf-root form.

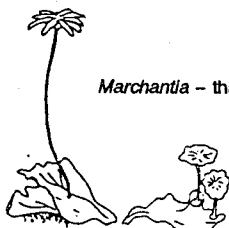
In general, liverworts prefer more shade and moisture than mosses; leafy liverworts especially are much more abundant in the warmer wetter western part of Montana than east of the Continental Divide. They are frequently difficult to distinguish from mosses, but they tend to be flatter, with their leaves attached to the main stem in a different manner, and capsules not on top of tall stalks. One of the world's experts on hepatics, Dr Won Shic Hong, who teaches at College of Great Falls, has published extensively on western North America liverworts. He estimates about a hundred species of hepatics in Montana, 60% of which are leafy.

Hornworts are not only visually more obscure, but are less common overall than are liverworts. I've only seen two species in all my travels around the state, and those were west of the Divide.

Mosses and liverworts are very good at reproducing asexually -- they can regenerate from fragments, and many of them produce a multicellular structure of some kind, a *gemma*, that floats or blows away to produce the beginning of a new colony.

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Marchantia – thalloid liverwort



Plagiochila – leafy liverwort



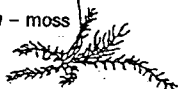
Pohlia – moss



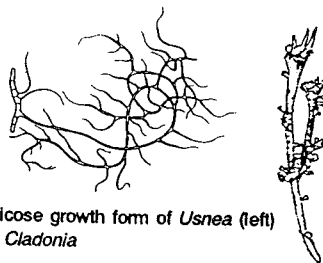
Syrrhapodon – moss



Leptodictyum – moss



Fruticose growth form of *Usnea* (left) and *Cladonia*



Illustrations redrawn from:
Conard, H S, How to Know the Mosses
and Liverworts;
Hale, M E, How to Know the Lichens.

REPORT: ALPINE WILDFLOWERS OF THE GRAVELLY RANGE - 6th ANNUAL MNPS MEETING

Wall Creek Management Area was the place to be on July 23-25. Over 60 people traveled long distances to view the rich display of wildflowers in the high meadows of the Gravelly Mountains south of Ennis. The Clark Fork Chapter based in Missoula hosted this year's meeting. Beautifully designed T-shirts and autographed copies of *Alpine Wildflowers of the Rocky Mountains* by Joseph Duft and Bob Moseley were sold to raise money. A big thanks to all the organizers of the meeting and the Montana Dept of Fish, Wildlife and Parks for donating the use of their facilities at Wall Creek. The dry hay loft of their horse barn was a welcome shelter from this summer's most frequent weather condition - rain!

Attendance and enthusiastic participation in this unique style of annual meeting was encouraging. Unfortunately the rain changed the format to less hiking and more driving. Planning ahead for bad weather will be essential for success of future meetings like this one. I thought it was ironic that after our thorough soaking at timberline our next annual meeting location is likely to be the "Montana Desert" in the Pryors.

The following report covers the highlights of our fun filled weekend.

SLIDE PRESENTATIONS

Friday evening's activities consisted of a series of slide shows. Everyone gathered in the cozy loft with hay bales as seating. Plant enthusiasts never tire of flower pictures.

The first show was flowers from the alpine areas of Glacier National Park and the Beartooth Mountains, where botanist Peter Lesica roams during his summer adventures. Next up was Steve Cooper, whose winter home is in Virginia, with Alpine Plant Communities of Southwest Montana. Steve is a vegetation classifier and many of his slides illustrated the work he is doing in the Gravellys.

For the grand finale, Bob Moseley transported us to the far-away Andes Mountains to feast on photos of colorful and exotic alpine flowers. Bob came all the way from Idaho where he is director of the Idaho Natural Heritage Database. He also co-authored the aforementioned *Alpine Wildflowers of the Rocky Mountains*. We really appreciated his participation in this year's annual meeting.

WET AND WILD FOUR WHEELING

Fortunately Montanans come prepared for any weather. An entire night of steady rain forced us to change from Plan A to Plan B: a long drive over the winding Gravelly Ridge Road. We achieved our destination despite the conditions. When we arrived at our first stop, a timberline clearing called Clover Meadows, we were greeted by a heavy downpour. Undeterred, the three botanists led groups on mini-hikes. Helping out were several Beaverhead National Forest personnel, who described the soil tests and vegetation monitoring being carried out at this site. Our brightly colored raingear rivaled the flowers.

Peter Lesica's group was fortunate to see small-flowered pennycress, *Thlaspi parviflorum*, a plant on the Forest Service Sensitive Plant List found in only three Montana counties. Other noteworthy plants observed were alpine timothy (*Phleum alpinum*), our only native timothy; and *Valeriana edulis*, called edible valerian or more commonly tobacco root (for which the mountain range was named).

The cloud cover remained low as we drove onward and upward. The terrain changed to unmistakably alpine with its

accompanying vegetation. At our second stop the weather conditions began to improve, greatly enhancing the scenery.

The ridgetop was a dazzling display of beautiful plants. We quickly identified the two flowers on our T-shirts, drawn by Jean Parker of Missoula: Old Man in the Mountains (*Hymenoxys grandiflora*) and Jacob's ladder, *Polemonium pulcherrimum*. A rich tapestry of low cushion plants such as *Phlox pulvinata*, and Rockjasmine (*Androsace chamaejasme*) beckoned a closer look. The complementing colors of Fernleaf Lousewort, *Pedicularis cystopteridifolia* and Monument Plant, *Frasera speciosa*, were a gardeners delight. Little-Flowered Penstemon (*Penstemon procerus*) adorned the roadsides with its violet color.

Clearing skies offered breathtaking panoramas of the valleys below and made the drive back more interesting.

SPECIAL APPRECIATION AWARD

An informal award ceremony was held Saturday morning for our industrious newsletter editor Jan Nixon. Since the summer of 1988 Jan has provided the Society with four interesting and informative newsletters each year. Despite her busy life, she manages to produce a very professional publication and we love her very much for this. Jan was instrumental in starting the Bozeman Chapter and is also an enthusiastic field trip leader in the area. She received the books *Women in the Field*, and *Botanical Explorations of the Trans-Mississippi West*, and a watercolor of violets by Constance Skousen. A big round of applause for Jan! And many thanks to all who contribute to Kelseya. [and many thanks to all of you for these great gifts! JN]

MEANWHILE... BACK AT THE BARN

Besides having fun and socializing a major function of our Annual Meeting is to conduct general membership and committee meetings. At these meetings we can reflect on our progress and decide on committee projects for the coming year. Angie's "State of the Society" address touched on the past year's events.

The results of this year's elections put me, your former vice-president in office for two years as president. Former Treasurer Roxa French will finish my term as vice president. Roxa has done a fine job as treasurer of the Society since the summer of 1989. Our new treasurer is Madeline Mazurski, a landscape architect from Missoula. Another new board member is Dennis Nichols, who will represent all the "at large" members in the western part of the state. Dennis lives in Trout Creek and has organized several meetings in nearby Dixon. Past president Angie Evenden will remain an active board member. We appreciate all her work over the past two years and look forward to her continued involvement.

Statewide activities include the continuing sale of the *Native Plant Source Guide* and the newly completed "Conservation Guidelines for Collecting Natives," initially drafted by the Conservation Committee.

All the Chapters gave encouraging reports of the year's activities and projects. So much can be done through these local chapters where monthly meetings keep the energy flowing. Many thanks to all the chapter officers for their time and enthusiasm.

Committees gave short summaries of their activities. Discussion followed on what the purpose of statewide committees is and what they can hope to accomplish. Because the committees meet only once a year they must choose one or two

- continued next page

MNPS TO DEVELOP NATIVE PLANT GARDENING GUIDES

– Harvey Bjornlie

With the current building boom in various parts of Montana, and the growing concern for water conservation, we are often asked for information on gardening with native plants. To meet this need, the Landscape Committee (at the 1993 Annual Meeting at Wall Creek) has set a goal to develop a set of Guides to Native Plant Gardening. It will include lists of commercial sources of natives, of gardeners with native plant experience, of gardens both public and private which are available for public viewing, and a guide to selecting, planting and nurturing natives.

The first of these is already available as the Montana Native Plant Source Guide, published thanks to the efforts of Linda Iverson in 1992. The Gardeners and Gardens listing will be published in time for 1994 spring planting. We intend to make these Guides available to anyone interested in native gardening,

including individuals, developers, landscape architects and governmental agencies.

The questionnaire enclosed in this newsletter is for gathering the information needed for the **Gardeners and Gardens** list. Please fill it out if it applies to you, or pass it on to someone you know who gardens with natives. Additional copies of the questionnaire are available from your local chapter. We intend to list all willing native plant gardeners, not just MNPS members.

The **Gardeners and Gardens** list will be compiled by Rachel Potter of the Flathead Chapter, published in *KELSEYA*, sent to non-member respondents, and distributed by the local chapters to anyone seeking information about native plant gardening. If you would like to help with this project, please contact your chapter or at-large representative, or Linda Iverson.

ANNUAL MEETING REPORT, continued from Page 2:

attainable projects or give recommendations to the membership at large and the chapters. Still, the committees are a good place for special interests pertaining to native plants to be addressed.

NIGHTLIFE

No campout is complete without scary stories, although we missed our campfire and s'mores. Anne Garde displayed her theatrical talents reciting the shivery tale "The Cremation of Sam McGee," by Robert Service. Clare Strickler gave a skillful rendition of an American Indian Legend about the origin of the mosquito. And to "top off" the evening the audience tried their hand at creating a story but I never knew exactly what it was!

COMMITTEE MEETINGS

Sunday morning the three committees met. The following reports tell just what happened. If you were unable to attend these meetings but would like to get involved, please call the chairperson of the committee that interests you. Success means involvement!

EDUCATION: One of the main goals of our society is to educate the public about the values of native plants. This report came from Linda Heinze, a teacher from Billings. Chairperson Blue Tanttari was not able to attend.

The committee made a list of recommendations for members and chapters concerning education:

1. Better information dissemination by having members attend and represent MNPS at local/regional fairs, pertinent conventions and expositions, garden clubs etc. I might add that we have a display, originally built by Jan Nixon, but in need of repair (hint, hint). Also an excellent slide show created by Sheila Morrison of Clark Fork Chapter is available.
2. Local chapters can work with other community service/conservation groups and government agencies to achieve local community and chapter projects (such as weed pulls, collecting guidelines, sensitive species, or revegetation efforts)
3. Distribute the MNPS brochure to Chambers of Commerce, Cooperative Extension Offices, SCS, Museums, Zoos, Libraries etc. Each chapter has a master of the brochure.
4. Continue to focus on state weed problems and educate the public about the problem.

CONSERVATION: The conservation committee was formed for the purpose of furthering the conservation of our native plants. Fifteen MNPS members attended the meeting with Chairman Sally Orr in attendance. Sally gives this report.

The following members are serving as chapter representatives on the committee: Artemisa–Don Heinze; Clark Fork–Scott Miles and Lois Puckett; Flathead–Pattie Brown; Kelsey–rep needed!; Valley of the Flowers–Robyn Klein; Western at Large–Dennis Nichols; Special Reps for statewide and regional issues–Angie Evenden and Dana Field. This is a great way for the chairman to keep in touch with chapters.

There are many city, county, state, or federally proposed activities which impact native plants. These actions range from local development activities, such as a new road or subdivision, to proposed changes in state or federal laws or regulations, such as affecting treatment of noxious weeds or introductions of exotic/non-native species. The conservation committee feels it is important for MNPS to participate in the decision making process in those actions potentially affecting native plants. The committee decided that each chapter will become involved in at least one project for the coming year, and will work toward improving the consideration and future of native plants on that project. You can help your chapter representative to the conservation committee by: Suggesting local, state or federal actions to work on, or writing letters and calling officials responsible for the projects to discuss your concerns about native plants.

LANDSCAPE/REVEGETATION: A small but productive group met with Linda Iverson chairing for Greg Hallsten. Chapters represented were Valley of the Flowers, Flathead, Clark Fork, and one "at large" member. See article above about our plans to develop native plant **Gardening Guides**, a major project planned for the coming year.

Gathering information on growing natives is an ongoing process. We hope that by having a gardener's "network" we can all learn more. Please participate in this process even if your experience is limited to only a few plants. The end result, a guide to selecting, planting, and nurturing natives is a much needed resource.

Some of the chapters participate in community projects that involve native gardens or revegetation work. We encourage more of these activities. Contact our committee chair for help in starting such a project.

NEWSLETTER: This committee did not formally meet at Wall Creek. Jan Nixon currently has Chapter reps that she contacts for news, meeting schedules, field trip reports, etc. Anyone is welcome to submit material at any time. Information on deadlines and submission details is carried on the back page of each issue.

– continued on page 7

MEETINGS

MONDAY, NOVEMBER 1, ARTEMISIA CHAPTER: 7:30 pm, Bair Science Center, Rocky Mountain College campus, Billings. Program TBA.

WEDNESDAY, NOVEMBER 3, VALLEY OF THE FLOWERS CHAPTER: 7 pm, Loft of the Plant Growth Center, MSU Campus, Bozeman. Botanist Jennifer Whipple from Yellowstone National Park will discuss issues relating to the vegetation of the Park. A short business meeting will also be conducted.

THURSDAY, NOVEMBER 4, KELSEY CHAPTER: 7 pm, Lewis & Clark Library, Last Chance Gulch, Helena. Wayne Phillips presents "Botany of the Lewis and Clark Expedition." Refreshments will be served.

SATURDAY, NOVEMBER 6, MNPS BOARD OF DIRECTORS: 10 am, at the home of Madeline Mazurski, 3909 Lincoln Rd, Missoula. Any member of MNPS is welcome to attend - you don't need to be an officer or director. Please bring a lunch. Call Madeline at 542-0262 if you need directions.

THURSDAY, NOVEMBER 11, CLARK FORK CHAPTER: 7:30 pm, Rm 307, Botany Bldg, UM campus, Missoula. James Habeck of the UM Division of Biological Sciences will show slides of "Ecotrekking in Australia's Northern Territory."

WEDNESDAY, NOVEMBER 17, FLATHEAD CHAPTER: 7 pm, at the Fish, Wildlife & Parks Bldg in Kalispell. "The Slimy and the Scaly - Amphibians and Snakes Alive by Sam, Sam the Reptile Man!" Sam Manno is with Frog Watch. Does this relate to native plants? You bet. Board meeting at 5:30.

WEDNESDAY, DECEMBER 1, 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 8, ARTEMISIA CHAPTER: 7:30 pm, Bair Science Center Rocky Mountain College campus, Billings. Program TBA.

THURSDAY, DECEMBER 9, CLARK FORK CHAPTER: 6:30 pm, Annual Christmas Potluck will be held at the home of Sheila and Gary Morrison, 3912 Lincoln Rd in the Rattlesnake. Bring a salad, main dish or dessert, and a few of your favorite slides from the summer and join us. Call Sheila (8721-1398) for more information.

WEDNESDAY, DECEMBER 15, FLATHEAD CHAPTER: Annual Christmas Party at Neal and Pattie Brown's home, 560 Wolf Creek Dr, Bigfork. The event of the season - don't miss it! Happy Hour starts at 6pm, potluck supper at 7 pm. Bring an inexpensive wrapped present for a Chinese auction. Call Pattie at 837-5018 for details.

THURSDAY, JANUARY 13, CLARK FORK CHAPTER: 7:30 pm, Rm 307, Botany Bldg, UM campus, Missoula. Ray Calloway of UM's Division of Biological Sciences will speak on "Plants Helping Other Plants: Positive Interactions in Nature."

FIELD TRIPS

Artemisia Chapter already has four field trips penciled in for spring/summer of 1994 (in addition to those associated with the

Annual Meeting!) - details will be published in the Winter issue of KELSEYA.

And Doug Smith writes from Dagmar with word of a new chapter a-brewing in far eastern Montana, with plans for a trip or two next summer, including one to the Nature Conservancy's newly acquired Comertown Prairie Pothole lands - way to go, Doug!



FIELD TRIP REPORTS

FALL FORAY WITH DR MUSHROOM

The adventure began for us on Friday, October 8, when we spent the afternoon in the Swan Research Natural Area, exploring and searching for mushrooms. "Dr Mushroom" - Larry Evans - arrived from Missoula just in time for dinner with a basket of mushrooms which he found close to our home up Bear Creek (near Bigfork). We quickly sauteed up some *Suillus* and put them on top of our spaghetti. Larry talked about his recent forest work in Siberia; sounds like good program material to me!

Saturday was a glorious, clear, crisp morning, warming to near 70° by afternoon. We met in downtown Bigfork where we examined mushrooms which Larry had identified. Then an enormous group of us descended upon Jewel Basin X-Country ski area off Foothills Road and scoured the forest collecting fungi specimens. In a couple of hours we responded to the horn calling us back, and we displayed our finds. It looked like a mushroom Farmer's Market or fair with each person standing by a mount of colorful 'shrooms.

It is a bit overwhelming for the beginner, but Larry identified most and talked about related subjects such as mushroom toxins, David Arora, cooking and nutrient value. A tip: since mushrooms absorb compounds from soils, don't eat 'shrooms along highways and sprayed areas. I made notes on 25 species, and didn't even attempt to list all that we found. The last of us reluctantly left the woods at 3 pm, made another stop on the way home, and ended a very find day with cream of *Cantharellus* soup! As Neal Brown says, "Larry is a whirlwind, and I'm still dizzy!" Thanks Larry - and come on back!

- Pattie Brown

ARTEMISIA CHAPTER TRIPS

Artemisia Chapter was very active in 1993, with five well-attended field trips.

Two Moon Park is on the north side of the Yellowstone River at the edge of Billings. We noted 42 species of plants. Unfortunately, no fewer than ten of these were noxious weeds. These undesirable exotics, especially Canada thistle and spotted knapweed, threaten to take over from our native plants. Still, Two Moon is a beautiful place and the people of Billings are fortunate to have such a park so close to home.

Meeteetse Spires: The Bureau of Land Management has designated this area southeast of Red Lodge an Area of Critical Environmental Concern (ACEC) because this is one of the most biologically diverse places in the state of Montana. In the space of less than five linear miles the vegetation

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FORESTS BENEATH YOUR FEET, continued from Page One:

Their sexual reproductive stage is more hidden, hence the name "cryptogam" for these groups of plants. Eggs are produced in an *archegonium*, sperm are produced in an *antheridium*; archegonia and antheridia can be on the same or on different plants. The sperm swims to the egg and after fertilization, a brief diploid stage (chromosomes in pairs) produces unicellular haploid spores in capsules; each spore can grow into a new little liverwort or moss plant. Capsules are obvious in most mosses, less so in liverworts. Without capsules, identification of most moss and liverwort species is very difficult. In some, capsules are rarely seen; in the more helpful species, capsules are produced usually once a year either from the tip of the moss thallus or from a leaf axil.

It is very rare to observe any moss or liverwort that has been nibbled on by a herbivore. As crisp and delicate as their little leaves appear when they are wet, they are evidently not edible. Their taste is either negligible or rather bitter, indicating a chemical defense

mechanism. They also crisp or twist up when dry, appearing not very palatable. However, bryologists have noticed missing capsules on many species, assuming that mice or voles use them as food. Documented observations of capsules being eaten are actually being solicited by bryologists.

Economically, mosses are more important than liverworts. *Sphagnum*, of course, is the major source of peat moss used by gardeners; it gives good pH and water-holding qualities to soil. *Sphagnum* has also been used as bandage and diaper material. Mosses, including *Sphagnum*, are anti-bacterial; they rarely mold or mildew and can inhibit bacterial growth in petri dishes. Other mosses, mostly the larger fern-type mosses like *Ptilium* or *Hylocomium*, are used for lining hanging baskets and for other decorative purposes. Ecologically, it is impressive in some wetter forests to observe the depth of moss cover; the moss carpet probably inhibits some seed germination but also is an important factor in regulating flow of water into and out of forest soils. Mosses in dry rangeland and some alpine locations form inconspicuous mats that help decrease wind erosion.

Montana probably has over 500 species of lichens, and about 400 species of mosses. Lichens are frequently associated with mosses, not very much with liverworts. Except for some cushion mosses that inhabit rocks, lichens can generally be in drier, sunnier locations than mosses and liverworts. Lichens are classified in the Kingdom Fungi because their sexual spore-producing structures are characteristic of fungi, usually Ascomycetes, the cup fungi. They are about 90-95% fungus, and 5-10% algae. The major alga is usually a green alga, but some lichens have cyanobacteria (bluegreen algae) as the algal symbiont, and some lichens have both green and bluegreen algae. Bacteria are also a common component of lichens, so they are a teeny ecosystem unto themselves. Since algae photosynthesize, lichens are usually not parasitic although they grow on tree bark, leaves in wetter climates, and over each other.

Lichens and mosses on rock are instrumental in speeding rock weathering in soil formation. They expand and contract as they

wet and dry, pulling up little pieces of rock from the substrate. They put down tiny root structures and break up soil, secrete carbon dioxide which combines with water to make carbonic acid that etches rock, and trap blowing soil. In Hawaii, it was estimated that rock with lichen and moss weathers 100 times faster than bare rock; in our climate, with freezing and thawing, the factor is probably much less, but feeling the soft rotten rock under lichen and moss pads is an indication of their weathering activities.

In some areas slugs feed on lichens on trees and rocks. Deer and elk have been observed feeding on the fruticose forms

(*Usnea*, *Alectoria*, *Bryoria*) on trees in winter, and pronghorn antelope will eat some soil lichens. The vast mats of reindeer lichens (genus *Cladina*) that reindeer and caribou feed on in Canada and Lapland are found only in isolated patches in the northwest corner of the state. Birds use lichens and mosses in nest-building, and insects sometimes camouflage themselves in a lichen jacket. Mites hide among lichens on soil, and ticks lurk behind thalli on trees.

The sometimes-spectacular colors of lichens are due to a variety of compounds

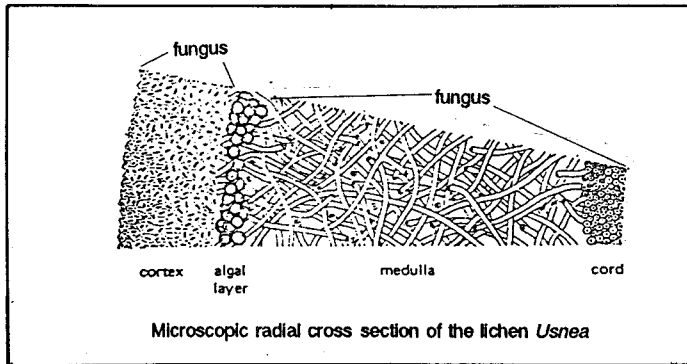
that are frequently unique to lichens, not a product of the isolated alga or the isolated fungus. In sunny locations, the brilliant orange or gold or deep brown colors are in the top layer of fungus. It is thought these pigments help protect algal chlorophyll from intense radiation. When the lichen is wet with rain or dew, the layer is more translucent so light can reach the chlorophyll in the algae. Lichens in the shade tend to have much less intense coloration. The same species, for example, can be almost black on the sunny side of a rock, and pale brown on the more shady side.

Mosses and lichens might be more popular if they had common names, but most of them do not. Identification of mosses requires microscope examination of the leaves, stem cells, and the capsule with spores. Lichen identification often requires chemical tests and microscopic examination of fungal spores. The vocabularies are completely different from those used in fern, gymnosperm, or angiosperm identification.

There are some very useful books for those wishing to branch into the world of the cryptogams. A New England physician, Dr John Bland, authored *Forests of Lilliput: the Realm of Lichens and Mosses*; it is a non-technical and informative book, easy and interesting to read. A handy picture guide for beginners is *Mosses, Lichens and Ferns of Northwest North America* by Vitt, Marsh and Bovey, although many Montana species are not included. The late Mason Hale's *How to Know the Lichens* is the bible for beginners in lichen identification, and Conard-Redfearn's *How to Know the Mosses and Liverworts* is the starting point for moss enthusiasts.

One word of warning about getting involved with this small world; it can make trekking slow and backpacks heavy if one gets involved with observing and collecting. However, those of us who do not have to see flowers to get a plant high find that this miniature forest is available for the looking all year long.

Sharon Eversman is Assistant Professor in the MSU Biology Department. Many of her research interests revolve around the "insignificant other" members of our flora - mosses, lichens, fungi and others.



MONTANA NATIVE PLANT SOCIETY *** MEMBERSHIP APPLICATION/RENEWAL

Date _____ New _____ Renewal _____

NAME _____ ADDRESS _____

CITY/STATE/ZIP _____ PHONE _____

STATEWIDE MEMBERSHIP WITH CHAPTER AFFILIATION* **MEMBER-AT-LARGE (Statewide membership only)**

___ \$12 I. Individual ___ 16 II. Family ___ 28 III. Business/Organization ___ 4 IV. Yearly chapter dues for Lifetime Members	___ \$ 8 I. Individual ___ 12 II. Family ___ 25 III. Business/Organization ___ 150 IV. Lifetime member (one-time payment)
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Additional Donation \$ _____

***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 local newspaper. 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 September each year will expire the following February; those processed after the first of October will expire in February of the year after. Membership renewal notices are included in the Winter issue of KELSEYA. Anyone not renewed by the time the Summer KELSEYA is ready to mail will be dropped from the mailing list/MNPS roster.

Your mailing label tells you

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 "x2/94" your membership expires February 28, 1994...renewal notices will be sent out next issue. New memberships received after November 1, 1993, are good through 2/28/95, and the top line of your label will read "2/95." 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

ANNUAL MEETING REPORT, continued from Pg 3:

MNPS POSTER: This project has no chapter designation. We discussed ideas with the general membership. Secretary Dana Field has volunteered to help coordinate a joint effort with the Forest Service to produce a poster on Threatened, Endangered and Sensitive Species. This might be a good starting point for future poster projects. We are in need of an artist and graphic design ideas.

WALK AROUND WALL CREEK

Late Sunday morning after all the meetings were through we explored the rocky outcrops and sagebrush-covered hillsides near camp. Botanizing under drier conditions and sunny skies was enjoyable. Many lower elevation dryland species were blooming. A highlight was seeing the elusive parasite *Orobanche corymbosa*, flattopped broomrape, featured in the Summer '93 issue of KELSEYA. We noted a strange phenomenon, a bluish coloration on otherwise pinkish lavender flowers of a native thistle, *Cirsium undulatum*. I collected seed to determine if there is genetic inheritance of this trait. My favorite plant of the day was *Eriogonum heracleioides* (Wyeth buckwheat) in full bloom, its large snowball flowers worthy of a photograph or two.

So ended the 1994 Annual Meeting. Thanks to everyone who made it happen. Hope to see you at the next one!

IN MEMORIAM: SHERMAN J PREECE, continued from Pg 5:

served on executive and other panels for the National Science

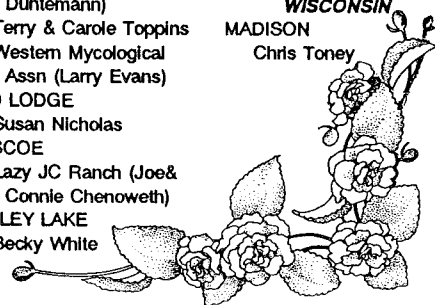
Foundation, and was professor and chairman of the department when he retired in 1983...."

- excerpted from Dr Preece's obituary in the Kalispell newspaper, sent to KELSEYA by Pattie Brown

PLEASE WELCOME THESE NEW MEMBERS:

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MONTANA NATIVE PLANT SOCIETY
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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.

Changes of address and inquiries about membership in MNPS should be sent to MNPS, P O 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 (prefer 3.5") 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, '95. The Winter issue of KELSEYA will be mailed the last week of December.

If you move, PLEASE send us your CHANGE OF ADDRESS!

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RACHEL CARSON'S LIFE & WORK INSPIRE "A SENSE OF WONDER"

In their purest form, the poet and the scientist are one and the same. They are seekers after truth. Rachel Carson, through the power of her biological knowledge and the beauty of her writing, became one of the great champions of the living world. The story of this woman's love for the natural world and her fight to defend it comes to life in Missoula on Saturday, November 6, in a theater performance of *A Sense of Wonder*.

Three decades have passed since Rachel Carson alerted the world to the dangers of pesticides in her landmark book, *Silent Spring*. Her work heralded the dawn of the modern environmental movement. This two act-play is about an extremely private person who is thrust into the uncomfortable role of controversial public figure in order to speak out for what she believes.

A Sense of Wonder is written and performed by gifted author and actress Kauilani Lee. With over twenty years' experience in the theater, Lee has starred in a dozen plays on and off Broadway, and has numerous film and television credits as well.

Lee has just completed a nationwide tour of *A Sense of Wonder*, and the Missoula appearance is the premier performance of the work in Montana.

The November 6 performance is set for 7:30 pm at the Music Recital Hall, Maurice Av on the UM campus. Admission is free but seating is limited, so sponsors of the event recommend you reserve a ticket by calling Becky Long at 1-800-466-6227. In Missoula, tickets are available at Rockin Rudy's.

The Northwest Coalition for Alternatives to Pesticides (NCAP) is sponsoring this event in association with the Environmental Studies Department of the University of Montana. This performance of *A Sense of Wonder* is part of NCAP's 16th Annual Meeting. NCAP is a regional non-profit organization dedicated to reducing pesticide use by educating the public about the hazards of pesticides and alternatives to their use. A cultural mini-grant from A Territory Resource (a public foundation supporting social change activities in the Northwest and Northern Rockies) helped underwrite this performance.