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MINNESOTA PLANT PRESS

Newsletter of the Minnesota Native Plant Society v9:3 spring 90

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UPCOMING MEETINGS

4 April 1990

Botany of South Africa
Peg Kohring

7 April 1990

*Gardening with Minnesota
Native Plants*
Minn. Landscape Arboretum
8:30A - 4:30P

2 May 1990

*Botany Photographs,
Field Trip Review,
Spring Plant Sale*



Ellen Fager

Native Plants On Minnesota Roadsides

Prior to European settlement the dominant vegetation community of nearly the entire upper Midwest was tallgrass prairie. However since that time, large expanses of native vegetation (including prairie) have become increasingly less common. Nearly one third of Minnesota was once native prairie; now less than 1% of it is left. Much of the native prairie that remains is found in areas that were unsuitable for agriculture, such as cemeteries, steep bluffs, and along rights-of-way. Rights-of-way have been recognized historically as refuges for native vegetation communities. This is particularly true of shared highway and railroad rights-of-way. Back in the 1800 & 1900s when railroads were first built, they transected the virgin tallgrass prairie of the upper Midwest. After tracks were laid down the surrounding prairie vegetation re-established back into the railroad right-of-ways that were initially disturbed by construction. Subsequently, many highways followed these early transportation routes and were built adjacent to railroad tracks. Frequently, long narrow corridors of prairie were isolated and protected in their shared rights-of-way. These corridors were left undisturbed by agriculture, while most of the rest of the surrounding prairie disappeared. Periodic fires along railroad rights-of-way have enabled the fire-adapted prairie species to flourish.

The Minnesota Department of Transportation (MnDOT) has recently completed a vegetation survey of its trunk highway system in which nearly 3,600 acres of right-of-way were found to still contain high quality native vegetation communities. It is obvious that roadside rights-of-way are environments that are continually disturbed, whether it be from human activities, or from naturally occurring adverse climactic conditions. Vegetation on roadsides is exposed to automobile exhaust, salt and applied chemicals. It is also subjected to drought, flooding and extreme temperatures. Results of surveys performed by MnDOT botanists suggest that right-of-way native vegetation communities are less susceptible to drought-kill, weedy invasion, and erosion than those rights-of-way containing introduced species. It is thought that this is because native plants are better adapted to survive here than non-native plants and diverse plant communities (such as a prairie community) are more able to withstand adverse conditions and frequent disturbance than monoculture plantings or low diversity non-native communities. Findings such as this have been instrumental in getting MnDOT to try new vegetation management techniques.

For several years MnDOT has been managing the prairie community found along T.H. 56 between the towns of Rose Creek and LeRoy using a combination of prescribed burning and limited mowing. This unique strategy has been a cooperative effort between MnDOT and the DNR. Under this management regime the prairie along T.H. 56 has flourished. Many species of native prairie plants can be found growing there. Some forbs include: Canada anemone (*Anemone canadensis*), buttercup (*Ranunculus* sp.), cinquefoil (*Potentilla* sp.), lead plant (*Amorpha canescens*), wild four-o'clock (*Mirabilis nyctaginea*), prairie phlox (*Phlox pilosa*), puccoon (*Lithospermum* sp.), spiderwort (*Tradescantia* sp.), blue-eyed grass (*Sisyrinchium* sp.), bedstraw (*Galium* sp.), wild rose (*Rosa* sp.), golden alexanders (*Zizia aurea*), stiff tickseed (*Coreopsis palmata*), grey-headed coneflower

(*Ratibida pinnata*), compass plant (*Silphium laciniata*), rattlesnake master (*Eryngium yuccifolium*), wild quinine (*Parthenium integrifolium*), turk's cap lily (*Lilium superbum*), prairie smoke (*Geum triflorum*), Canada tic-trefoil (*Desmodium canadense*), purple prairie clover (*Petalostemum purpureum*) and white prairie clover (*Petalostemum candidum*). There are several vetches, asters and indigos found there as well (Bob forgot his key that day). Some common grasses are: Big bluestem (*Andropogon gerardi*), little bluestem (*Schizachyrium scoparium*), Indian grass (*Sorghastrum nutans*), prairie dropseed (*Sporobolus heterolepis*), prairie cordgrass (*Spartina pectinata*), muhly grass (*Muhlenbergia* sp.) Canada wild rye (*Elymus canadensis*) and switch grass (*Panicum virgatum*). This stretch of Highway 56 was designated as the state's first Wildflower Route last summer and it also contains Shooting Star Prairie which is a DNR Scientific & Natural Area.

MnDOT has found that the use of herbicides and mowing for weed control have decreased along T.H. 56 and the use of prescribed fire has reduced chemical and mechanical removal of brush as well. This translates into direct cost savings over the years as herbicide use and mowing decreases. It is anticipated that under the present management plan that emphasizes the enhancement of the native prairie community along T.H. 56, the need for mowing will decrease to keeping the inslopes mowed short, the sight-lines clear for safety purposes and possibly patch mowing of weeds. This type of management plan decreases disturbance of the right-of-way by human activities substantially. Remaining disturbances are then left to natural causes (which are beyond our control), but for which the native species are adapted to survive.

There are a number of benefits to working with native vegetation along roadsides. Practical benefits to highway departments include the potential for a reduction in the cost of roadside maintenance and increased erosion control when native vegetation communities are present. Ecological benefits include the preservation of habitat for wildlife that utilizes roadsides for nesting cover and forage, the protection of rare plant and animal species, the potential preservation of natural genetic exchange between these species along linear corridors, and the protection of a significant percentage of the remaining tallgrass prairie communities in the upper Midwest. Rights-of-way containing native vegetation also serve as a seed source for future restoration efforts. Finally, native plants provide a display of seasonal color changes along roadsides, a "natural beautification".

To further explore the possibilities and benefits in working with native vegetation on Minnesota roadsides, the state has formed a task force composed of representatives from various state agencies, the University of Minnesota, private corporations, and the public sector. The task force serves to make recommendations and suggest guidelines for various state programs. The task force is also able to serve as an interface between the state and the public, with its growing interest in the use of native wildflowers and grasses for highway beautification. In addition, MnDOT and the DNR have begun cooperation (on a state-wide basis) in developing an integrated roadside vegetation management program. An interagency committee has been formed to set guidelines for this program. The two agencies are sponsoring a prescribed burn training workshop this spring for state

personnel and management practices to enhance native prairie communities similar to that being used along T.H. 56 will begin along a number of Minnesota highways in 1990.

The designation of T.H. 56 as Minnesota's first Wildflower Route is testimony to the fact that the goals of MnDOT, MnDNR and conservation groups can all be met, while at the same time the public benefits by seeing part of Minnesota's natural heritage flourishing once again along Minnesota's roadsides. More Wildflower Routes will be dedicated in the future, those slated for this summer are: T.H. 218 from Owatonna to Lansing Corners, T.H. 10 from Becker to St. Cloud, T.H. 212 from Olivia to Stewart, T.H. 9 from Benson to Breckenridge and T.H. 11 from Baudette to Greenbush. All of these routes contain remnant native plant communities, some of which are prairie and some of which are prairie/forest transition. T.H. 11 is noted for its spectacular show of orchids blooming in the spring. The dates for the upcoming dedications are still not set, however T.H. 11 will probably be dedicated on June 23rd and T.H. 218 may be dedicated on August 4th in association with the National Prairie Conference in Cedar Falls Iowa. The other routes will probably be dedicated in July and August. Final dates will be furnished to the media when they are decided upon. The dedications will be organized by local communities along the routes in cooperation with state agencies such as MnDOT, DNR, Department of Trade & Economic Development and Tourism. Activities will include a ribbon cutting ceremony, interpretive field trips to sites along the routes and various community activities culminating in a picnic or barbeque. Minnesota Native Plant Society members are invited to attend any or all of the dedications. We would love to see you there! If any of you are interested in participating in one of the dedications, either to help organize community activities or to lead an interpretive field trip, give me a call at .

Bob Jacobson (MnDOT Botanist)

Nancy Albrecht (DNR Resource Specialist and former MnDOT Botanist) performed much of the MnDOT vegetation survey. Kathy Bolin (DNR Resource Specialist) was instrumental in organizing and assisting in the management of the T.H. 56 right-of-way prairie and also helped organize the T.H. 56 Wildflower Route dedication last summer.

Available soon!
MNPS Guide to Spring Wildflower Areas
in the Twin Cities Region
(Updated 1990)

The updated Guide will be available at the *Wildflower Gardening Symposium* and at *MNPS* meetings. Cost is \$3.00, including postage. Orders may be sent to

Mn. Native Plant Society,
 220 Bio Sci Center,
 1445 Gortner Avenue,
 St. Paul, MN 55108

Nancy Sather, Minnesota Natural Heritage Program

One of the most exciting experience's I've had as a botanist with the Minnesota Natural Heritage Program was relocating a "lost" population of Western Jacob's Ladder in northern Minnesota in 1988.

The Western Jacob's Ladder (Polemonium occidentale var. lacustre) is a midwestern variety of a western montane species. The nominate montane species was first described in 1890 and was at one time reported to extend throughout the western mountains from Arizona to Alaska, but appears more conservatively to extend from Colorado to Montana and Idaho. It is reported in the flora of Utah and Nevada to range through "open woods of the pinyon, yellow pine, aspen and spruce belts".

The saga of the midwestern variety began in 1944 when it was discovered by Olga Lakela in a cedar bog in Morcom township north of Hibbing. Lakela sent her collection to E.T. Wherry, who in 1945 separated it from the western species as variety lacustre. The only subsequent Minnesota collection was made by George Monson, an unknown collector, in 1946. This collection was from a spruce bog in French township, immediately south of Morcom Township. Despite a mileage and road number on Lakela's original collection label, attempts to relocate the original population failed and its reliability began to be questioned.

Then in 1984 a population of the same plant was reported from a cedar bog in Florence County, on the Nicollet National Forest in northeastern Wisconsin. This find prompted the nomination of Polemonium occidentale var. lacustre as a candidate for federal listing and the Office of Endangered Species encouraged the Minnesota Natural Heritage Program renew our attempts to relocate the lost Minnesota population.

The rediscovery of "lost" plant populations is the result of a combination of sleuthing, persistence, and luck. I first consulted Dr. Paul Monson at UMD, whom I knew to have looked for the plant, to learn where he had looked; and Drs. Cliff and Isabel Ahlgren of the Wilderness Research Center, who had formerly collected with Lakela, to see what they recalled of her field habits. Armed with a set of aerial photographs and the opinion that Lakela probably didn't go too far off the road, I entered the wetland at an point east of the county road where cedar was easily visible because of a cleared powerline right of way. Ten fruitless hours later I tried the west side of the road, where aerial photos revealed cedar hidden from the road by a ditchline overgrown with other species. After several more hours of searching I literally stumbled upon a patch of vegetative plants.

Western Jacob's Ladder is a perennial flowering plant with a slender horizontally creeping rhizome. The leaves of mature plants are each comprised of up to 13 ladder-like opposite leaflets 2-7 mm. wide, with entire margins and tapering tips. On juvenile vegetative plants the number of leaflets may be as few as 3 to 5, with rounded tips, giving the plant a superficial resemblance to the polypody fern. Vegetative mature plants often occur in clumps.

The flowering stem is up to 70 cm. tall with alternate leaves and several flowers arising in an openly branched elongate flower head. Each flower is about 1 cm. in diameter with five bright blue to violet petals that fade to white in the center. The number of flowers per inflorescence varies from 1 to around 50. The fruit is a stiff greenish-yellow to yellow-brown persistent capsule.

Both the Minnesota and Wisconsin populations of Western Jacob's ladder are found in open cedar swamps with a history of logging 20 to 50 years ago. In each case, although vegetative plants are found in areas with closed canopies, the greatest numbers of flowering plants are in open wet areas with little canopy or shrub growth. Some associated species at the Minnesota site include: Cornus canadensis, Mitella nuda, Cypripedium reginae, Pyrola asarifolia, Linnaea borealis, Coptis groenlandica, Athyrium felix-femina, Gymnocarpium dryopteris, Rubus pubescens, Circaea alpina, Habenaria hyperborea, Carex lacustris, Calamagrostis canadensis, Carex trisperma, Arethusa bulbosa, Saxifraga pensylvanica, Iris lacustris, Impatiens capensis, Caltha palustris, and Dryopteris cristata.

Unlike the more common spring-blooming Jacob's Ladder (Polemonium reptans), the Western Jacob's Ladder flowers in midsummer, from the last week in June through the first two weeks of July. There is no known overlap in range of these two Jacob's Ladder species in Minnesota. Polemonium reptans is restricted to deciduous forests in the Big Woods region of southeastern Minnesota, whereas Polemonium occidentale var. lacustre occurs only in northeastern Minnesota. Despite differences in phenology, range and appearance of the two species, anyone familiar with Polemonium reptans could easily recognize that the Western Jacob's Ladder belongs to the same genus.

The Minnesota Natural Heritage Program is continuing its search for new populations of the Western Jacob's Ladder. We would appreciate leads on any Jacob's Ladder plants observed in northern Minnesota. We are also seeking volunteers to assist with our search in St. Louis County around the 4th of July. Interested people please call _____ or _____ and leave your name and address so we can send you a volunteer application.

Mentha Rotundifolia
... a transient lodger
 Charles Argus

Introduced from southern Europe and cultivated as a perennial herb and ornamental, the Round-leaved mint (*Mentha rotundifolia*), has frequently escaped from gardens throughout the southern states, but according to Gleason (B&B), its establishment in the north is uncommon. Fernald, however, records it as naturalized from Maine west to Michigan and south to Florida, Louisiana and Texas. Bailey (Mn.Cult.Plants) also reports it in New Mexico.

Like other garden plants, the Round-leaved mint can escape cultivation, for varying lengths of time, beyond its established boundaries. A curious case in point is a small population from south-central Ottertail County which has persisted for at least three years in a roadside stand of quaking aspen and beaked willow near Clitherall Lake. Its flowers produce an ample nectar secretion at the base of the ovary and are visited by small colonies of coloeopters and, especially, dipters. A cursory examination of gardens in the area failed to disclose its origin.

Although this population can be assumed to be transient, its presence here adds a pinch of flavor to the miscellany of local botanical trivia and represents a record of escape far outside the naturalized range of this species. At the same time, it should be noted that all of the other species of *Mentha* in our area, except *M. arvensis*, are naturalized introductions from Europe, and the present record suggests a possibility, however remote or unremarkable, that *M. rotundifolia* could yet have the tolerance needed to join their ranks.

Treasurer's Report

<u>January 1, 1990</u>		<u>March 1, 1990</u>	
Checking Account	\$1856.68	Checking Account	\$2193.96
6 mo. CD (101189)	<u>1000.00</u>	6 mo. CD (101189)	<u>1000.00</u>
Total	\$2856.68	Total	\$3193.96

On March 1, 1990, we had a listing 241 memberships representing individuals, households, organizations.

If you have questions about specific items of income or expense, please contact Charlotte Menzel

MNPS needs a volunteer for auditing its books. Please contact any board member if you can assist.

Report of the Education Committee

Several letters about wildflower gardening were received by us and answered.

MNPS has a very informative display-case prepared by Dr. Anita Cholewa. Many thanks to Pat Ryan for setting it up and answering questions at the Prairie Days at Afton. Roy Robison of Landscape Alternatives also had a booth there. Anne Manty and Robin Fox similarly helped at Fall Festival Days at the Arboretum.

Several members took the time to attend a Planning Commission meeting at White Bear Lake. The discussion was about the old ordinances and their appropriateness with new gardens such as the Nature Prairie Garden of Peggy Erickson. Cole Burrell represented the Arboretum, Bob Djupstrom the DNR, Bonnie Harper the Mn/DOT, and Charlotte Menzel, Mary Risdall and May Wright the *MNPS*. The planners were thankful for our input and asked for further information. We are preparing a statement to be given to them on March 9.

Beginning with the spring edition of the *Minnesota Native Plant Press*, there will be a series of articles on native plant gardens and restorations.

Respectfully submitted,
EDUCATION COMMITTEE, Dr. Gerald Ownbey,
Charlotte Menzel, Mary Risdall, May
Wright, chair.

NEW MEMBERS

Please welcome the following new members who have joined the *Minnesota Native Plant Society* this winter:

Dennis Albrecht, Minnetonka	Joan Albrecht, Minneapolis
Frank D. Bowers, Stevens Point	Nancy M. Davis, Stillwater
Robert Engstrom, Minneapolis	Peggy Erickson, White Bear Lake
Terry Ferriss, River Falls	Adrian & Liz Golledge, River Falls
Ann Haines, Minneapolis	Carol Hegre, Minneapolis
Diane Peck Hilscher, Plymouth	Leo Holm, Maplewood
Eldon Hugelen, Apple Valley	Beth R. Jarvis, Crystal
Sheila A. Jensen, Minneapolis	Nancy A. Johnson, Minneapolis
Mary Kado, St. Paul	Cindy & John Karwacki, St. Louis Park
John Kippely, Little Canada	Kathy Kittleson, Victoria
Erwin Mickelberg, Minneapolis	Minnesota Zoo, Apple Valley
Sonja Moseman, Hastings	Ms. Kathe Nelson, Gaylordsville
Susan L. Nelson, Corcoran	Marcie O'Connor, St. Paul
Jon Peterson, Hastings	Josephine Rapatz, Minneapolis
Connie Sansame, Northfield	Dr. Jerome Wagner, Anoka
Eric Weis, Ramsey	Robin E. Whaley, Knife River
Colette S. Wolf, Bloomington	

Field Trip Schedule

1990 Minnesota Native Plant Society 1990

Everyone is welcome to these expeditions. We encourage you to bring your friends along!

Bring your camera(s), binoculars, lunch....dress appropriately.

The schedule is reasonably firm; although changes may occur. Call for most current status: Don Knutson

1. OVERNITE CAMPING TRIP 29 June - 1 July *Dr. Anita Cholewa*

Botanizing near Isabella, MN. Vegetation includes black spruce bogs, aspen/birch forests and mixed pine/hardwoods forests.

"Barebones" are available at Forest Service Campground on a lake with a beach. There is a rustic lodge in Isabella, if you prefer, but please make your reservations with the lodge.

Anita Cholewa and Lynden Gerdes will each lead a Saturday field trip. This expedition is limited to 8 people and reservations are a "must:" call Dr. Cholewa at _____ by 31 May 1990. Additional details and directions will be mailed to participants in early June.

2. ST. CROIX One day: 16 June 1990 *Dr. Jerry Ownbey*

Prof. Ownbey will lead a field trip to St. Croix river area where will see a constituted prairie within Afton State Park, and a gravel ridge near Bayport which is home to several unusual plants. Our guide has invited us to have our brown bag lunch at his home nearby where we will review the growth performance of native trees that were planted in the garden area over 20 years ago.

3. WHITE BEAR LAKE Half-day: 12 May 1990 *Art Hawkins*

At their home north of White Bear Lake, Art Hawkins will focus on plants that are beneficial to birds and mammals. He will discuss invasive plants and the management difficulties associated with them. Again, remember your binoculars!

4. SAVAGE FEN One day: 25 August 1990 *Steve Eggers and Ellen Fuge*. (See no. 6, below, for directions)

This very popular field trip is an opportunity to see the unusual plants associated with the alkaline bogs. Boots are highly recommended.

5. WEAVER LANDING One day: 21 July 1990 There are no designated trip leaders, although *Steve Eggers* and *Ellen Fuge* will be along.

This group get-together will meet at Weaver Landing, Weaver, MN, just off Hwy 61, south of Wabasha, MN. It is a canoe adventure, so either bring

your own canoe, or arrange with others. Here we will see the beautiful water lotus in bloom, as well as other pond and marsh plants. There is no limit to attendance.... but you must paddle your own canoe!

P. VOLUNTEER WORK DAY, SAVAGE FEN SCIENTIFIC AND NATURAL AREA. One day: 19 May 1990. 10:00A-4:00P Steve Eggers and Ellen Fuge

Purpose: to girdle buckthorn, aspen and willow plants that are invading this rare calcareous fen plant community and shading out the rare species of plants. Prescribed burning is not possible because of lack of natural fire breaks.

Bring lunch, boots, and a small hatchet or machete or pruning knife: some tools will be available on the site

There is a limit of 20 participants, so make early reservations with Julie Muehlberg,

Directions: Hwy 13 west through Savage, MN, to signal light where Hwy 13 turns south: proceed south about 1/2 mile to 128 Street: turn east on 128 Str. to dead-end: the SNA sign is visible at this point. Assemble at the SNA sign at 10:00A.

7. HENNEPIN NATIVE MATERIALS NURSERY AND PRAIRIE (RESTORED) One day: 9 June 1990 John Moriarty 476 4663 for details.

Announcing Publication of
PROCEEDINGS OF THE ELEVENTH
NORTH AMERICAN PRAIRIE CONFERENCE

1. Prairie Plant Communities; 2. Prairie/Grassland Preservation; 3. Grassland Management; 4. Fire and Prairie Biota; 5. Prairie Plants; 6. Prairie Animals; 7. Landscaping with Prairie Plants; 8. Landscape Competition/Photographic Awards

US\$20.00 Make checks payable to:
Eleventh North American Prairie Conference,
Dept. of Biology, ATTN Tom Bragg,
University of Nebraska at Omaha,
Omaha, NE68182-0040

Announcing
Twelfth North American Prairie Conference

August 5-9, 1990
University of Northern Iowa
Cedar Falls, Iowa

Contact: Daryl D. Smith, Univ. of Northern Iowa, Cedar
Falls IA. 50614 Tel.: 319/273/2238

VEGETATION SURVEY OF OTTAWA BLUFFS FEN

In the Spring 1989 (Vol. 8:3) issue of the Minnesota Plant Press I reported the discovery in October 1988 of a calcareous fen plant community along the bluffs of the Minnesota River in Le Sueur County. The article mentioned that follow-up vegetation surveys would be done during the 1989 growing season.

The first of two surveys during the 1989 growing season was conducted on May 27. I specifically timed the survey to coincide with the peak of the white ladyslipper (*Cypripedium candidum*) bloom. Whereas populations of white ladyslippers were in full bloom at this time in other Minnesota River valley calcareous fen communities (e.g., Fort Snelling State Park Fen), I did not find any white ladyslippers in the Ottawa Bluffs Fen. This is puzzling in that the habitat is ideal and Welby Smith (Botanist with the Natural Heritage Program) informed me that he had located large populations of white ladyslippers in other areas of this same wetland complex. I intend to survey the fen this spring to again search for white ladyslippers.

A highlight of this fen is that one of the dominant species is beaked spike rush (*Eleocharis rostellata*), a species listed as threatened in Minnesota. This population, and that of the Savage Fen also located in the Minnesota River valley, are about 200 miles disjunct from the other seven Minnesota populations of beaked spike rush. A range map was included as part of the article that appeared in the Spring 1989 issue.

The fine, caespitose sedge I previously reported was confirmed to be sterile sedge (*Carex sterilis*), another threatened species. Other notable species included cottongrass (*Eriophorum angustifolium*) and marsh marigold (*Caltha palustris*). An interesting feature was a large, iron-rich spring upwelling downslope of the calcareous fen community.

Welby joined me for the second survey on August 19. In short order we found two additional species listed as threatened in Minnesota: nut-rush (*Scleria verticillata*) and fen beak rush (*Rhynchospora capillacea*), both members of the sedge family. Other notable species were bog arrow grass (*Triglochin maritima*) and a native loosestrife (*Lythrum alatum*), not to be confused with the noxious purple loosestrife (*Lythrum salicaria*). Showy wildflowers included blazing star (*Liatriis ligulistylis*) and great lobelia (*Lobelia siphilitica*).

In total, 81 species were identified within the fen including four listed as threatened.

One final note: an unauthorized dredge and fill activity adjacent to the fen was reported. The person doing the work subsequently applied to the Corps of Engineers for an "after-the-fact" permit pursuant to Section 404 of the Clean Water Act. Additional dredge and fill is also proposed. The purpose of the project is wildlife habitat enhancement. As part of the permit review, the Corps will consider any potential impacts to the fen and work with the applicant to determine the best options available.

-- Steve Eggers

RELATIVE FLOWERING TIME, HEIGHT AND COLOR
OF SOME WOODLAND WILDFLOWERS IN A
CENTRAL MINNESOTA GARDEN

<u>Common/Scientific Name</u>	<u>Flower time</u>	<u>Height</u>	<u>Color</u>
Snow Trillium	March-May	Low	White
<i>Trillium nivale</i>			
Sharp-lobed Hepatica	March-May	Low	White, pink
<i>Hepatica acutiloba</i>			blue, lilac
Round-lobed Hepatica	March-May	Low	--same--
<i>Hepatica americana</i>			
Bloodroot	March-May	Low-Med.	White
<i>Sanguinaria canadensis</i>			
False Rue Anemone	March-May	Low-Med.	White
<i>Isopyrum biternatum</i>			
Bellwort	Mid-May	Medium	Yellow
<i>Uvulana sessifolia</i>			
Large Trillium	Mid-May	Medium	White fade
<i>Trillium grandiflorum</i>			to pink
Blue Phlox	Mid-May	Low	Blue
<i>Phlox divaricatum</i>			
Nodding Trillium	Mid-May	Medium	White
<i>Trillium cernicum</i>			
Yellow Lady's slipper	Mid-May	Medium	Yellow
<i>Cypripedium pubescens</i>			
Merrybells	Mid-May	Low	Cream
<i>Uvularia sessilifolia</i>			
Jack-in-the-pulpit	May-June	Medium	Green with
<i>Arisaema triphyllum</i>			purple str
Blue Cohosh	May-June	Tall	Yellow
<i>Caulophyllum thalictroides</i>			
Wild geranium	May-June	Medium	Lilac
<i>Geranium maculatum</i>			
Wild columbine	May-June	Medium	Red, yellow
<i>Aquilegia canadensis</i>			
Rosy twisted-stalk	May-June	Medium	Pink
<i>Streptopus roseus</i>			

Wildflower Route

THE GALLERIA, EDINA, MN.
March 17, 1990 — April 14, 1990

A route of *Wildflower Works of Art* in progress by Edina Art Center artists will lead customers through the shopping complex. An information booth in the route will be staffed by wildflower experts to answer questions, information about support groups will be available, and Minnesota wildflower seeds will be available for nominal donations. Profits will go toward the Minnesota branch of the *National Wildflower Research Center*.

Saturday seminars will be conducted on Minnesota Wildflower activities:

March 17	11:00A	<i>Bonnie Harper-lore, MN/DOT</i> ROADSIDE WILDFLOWER RESTORATION
	2:00PP	<i>B. J. Farley, MN DNR</i> THE NATURAL HERITAGE PROGRAM
March 24	11:00A	<i>Kathy Bolin, MN DNR</i> WILDFLOWER ROUTES AND PRESERVATION
	2:00P	<i>Peter Schaefer, MN DNR</i> ROADSIDES FOR WILDLIFE
March 31	11:00A	<i>Cole Burrell, MN Landscape Arb.</i> USE OF PRAIRIE AND WOODLAND WILDFLOWERS IN GARDENING
	2:00P	<i>Ron Bowen, Prairie Restorations Inc</i> WILDFLOWERS AND THE LAW
April 7	11:00A	<i>Kathryn Malody, former MN DNR</i> WILDFLOWERS OR WEEDS: THE DIFFERENCE
	2:00P	<i>Fred Sommers, Artist</i> A LOVE AFFAIR WITH NATURE
APRIL 14	11:00A	<i>STEVE EGGERS, USARMY CORPS</i> USE OF WETLAND WILDFLOWERS
	2:00P	TO BE ANNOUNCED....

Mn/DOT Technical Services Division assisted in organization of the
 GALLERIA "WILDFLOWER ROUTE"

1989/1990 MNPS OFFICERS AND BOARD OF DIRECTORS

David McLaughlin, *Pres. (1990)* Don Knutson, *Vice pres. (1990)*
 Robin Fox, *Secr. (1991)* Charlotte Menzel, *Treas (1990)*
 Cole Burrell, *Director (1990)* Steve Eggers, *Director (1990)*
 Ellen Fuge, *Director (1992)* John Moriarty, *Director (1991)*
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Donations made to M.N.P.S. are tax-deductible

Minnesota Plant Press may be obtained through membership in the Minnesota Native Plant Society. The newsletter is distributed three times a year (fall, winter, spring). Items of interest for inclusion in the newsletter will be welcome. Please submit typed, double-spaced copy: submissions via computer disks are welcome, but please include hard copy and identify word processing program.

Minnesota Native Plant Society,
 220 Biological Sciences Center,
 University of Minnesota,
 St. Paul, Minnesota 55102