



# Minnesota Plant Press

Vol. 11:1 Newsletter Of The Minnesota Native Plant Society, Fall 1991

## Upcoming Monthly Meetings

The Minnesota Native Plant Society holds monthly meetings from October through May, on the first Wednesday of each month, unless otherwise stated. Meetings are held in room 335 Borlaug Hall, St. Paul campus U of M. Meeting times: 7:30 - 9:00 PM.

- October - Seed Storage & Germination Tips - May Wright. Survey results, discussion of proposed committee structure, seed exchange.
- November - The Dynamic Prairie: Disturbance Leads to Diversity - Prof. Charles Umbamhower, St. Olaf College.
- December - The Minnesota Department of Agriculture Endangered Species Protection Program - Lisa Mueller.
- January - Conserving Grassland Biodiversity: Northern European and Midwestern Approaches - David Wedin. NOTE: This meeting is January 8th.
- February - Minnesota's Native Orchids - Dianne Plunkett.

## Touches of Fall Color in the Wildflower Garden

May Wright

The splendid color in our native deciduous trees such as the maples, oaks, and linden, draw our attention at this time of year. Have you noticed that there is also rich color in the understory shrubs and vines in the wildflowers carpeting the forest floor? Here are a few plants that can be seen in a stroll through the woods or the woodland garden.

A vine that is often sold in the cities for home decoration is the bittersweet (*Celastrus scandens*). It's orange capsule opens to display crimson seeds. In your garden, put male and female plants close together to ensure pollination and seed set.

Another well-known vine is Virginia creeper (*Parthenocissus quinquefolia*). It's berries are dark blue, but it's leaves turn a rich red color. It spreads rapidly and must be trimmed back periodically to keep it from taking over.

### Inside

Announcements.....	2
President's Message....	2
Wetland Legislation Summary....	4
Buying Native Wildflowers?.....	7
Native Plant Watch: <i>Polemonium</i> ....	8
Weaver Bottoms Summer Field Trip....	8
Board of Directors....	20

Fall Color continued on pg. 6

## Editor's Note

*Bob Jacobson*

I'm sorry to report that Sarah Vest has decided not to work on the newsletter anymore. We should commend her for her assistance last year. She did an excellent job and was responsible for many of the improvements that were made in 1990-91. Thanks Sarah!

We still need newsletter articles. If you would like to submit an article for publication, please do so! Longer articles should be submitted on a 3 1/4 inch floppy disk, preferably Macintosh formatted, but I can translate DOS formatted disks too. Unformatted (text) files are the easiest to work with. I will type in shorter articles of one page or less myself. Illustrations, graphics, cartoons and even poetry are welcome as well. Articles can be sent to me at:

Bob Jacobson

## Announcements

- **Membership Renewal** - It's time to renew your memberships. Dues have gone up slightly (the Board members have to pay for that trip to Jamaica somehow! Just kidding). There is a membership renewal form towards the end of the newsletter.
- The Society is sorry to announce the passing of one of it's members; Horace F. Chamberlain, of LeSeur, MN. Mr. Chamberlain was active not only in the MNPS, but was a member of the Minnesota Ornithologists Union, The Nature Conservancy, Minnesota Valley National Wildlife Refuge, and was a Master Gardener. He and his wife recently donated 240 acres of land on the Minnesota River in LeSeur county to the DNR, which was designated a Scientific & Natural Area.

## A Message from the President, Sept. 1991

*Don Knutson*

As we begin our 10th anniversary year, we want to congratulate you all for building the Minnesota Native Plant Society from an idea into a vigorous professional society. For a decade our objective has been to become the champions of Minnesota's native plants and their advocates. You have each supported this goal through your membership, your attendance, and your contributions to the newsletter, the speaker program and, of course, the committee work. Thank you for a decade of devotion to plant conservation! To get a feeling for what you would like the second decade to be, we sent out a questionnaire this last spring (if you didn't get one, please write or call for one). Ms. Pat Ryan summarized your responses as follows:

- You listed your interests in native plants under headings: "hobby, gardening, education and professional."
- You like the newsletter, and thought it is generally well-done, with a good balance of topics.

- Newsletter topics you suggested included gardening with wildflowers, where to go to see native plants, garden tour schedules, directories of plant sources, lists of garden clubs, and scientific articles on native plants. Some of you would like these as permanent columns.
- You like the symposium and prefer the metro as a location.
- Your suggestions for our monthly meeting programs included plant propagation, gardening practices, ecosystem analysis, species diversity and plant/wildlife relationships (including insects).
- Many of you are willing to lead field trips, give talks at our monthly meetings, write articles for the newsletter, work on the newsletter, and work on our standing committees. You had many more ideas than we can mention here. Thank you! Keep them coming!

Overwhelmingly, you want a stronger, more active society and you are willing to be more active in it. Just good news, this is, for Minnesota's native plants! Now we need to focus on selecting our objectives. What is it that we want to get done? Our purposes, as set out in the By-Laws, are as follows:

1. Conservation of all native plants.
2. Continuing education of members in the plant sciences.
3. To educate the public on environmental protection of plant life.
4. To encourage research and publications on native plants.
5. To study legislation on Minnesota flora, vegetation and ecosystems.
6. The preservation of special plants, plant communities and scientific and natural areas.
7. To cooperate in programs concerned with the ecology of natural resources and scenic features.
8. To promote fellowship with all persons interested in native plants -- through meetings, lectures, workshops and field trips.

Recall that currently our major activities are the monthly meetings (with speakers, the seed exchange, and the plant sale), the annual symposium, the summer field trips and the newsletter (The Plant Press).

To better serve these activities, the Board recently decided to reduce the number of committees to four, and to give each committee more defined responsibilities and greater authority. These committees and their areas of activity are listed below:

1. **PROGRAM COMMITTEE** - Responsible for the monthly programs, symposium, field trips, seed exchange and plant sale.
2. **PUBLICATIONS COMMITTEE** - Responsible for publishing and soliciting articles for the newsletter, printing brochures, posters, etc. Sending out written materials in response to public requests for information about native plants. Keeping a roster of members with addresses and phone numbers.
3. **EDUCATION & OUTREACH COMMITTEE** - Responsible for new memberships, answering inquiries about memberships. Promoting new member involvement in Society affairs and providing refreshments at our monthly meetings. Also involved in Society publicity, historian activities and outreach to schools.

4. **CONSERVATION COMMITTEE** - Responsible for representing our point of view to duly elected officials of government, for lobbying legislators, for liaison with other conservation groups.

It is the opinion of your Board of Directors that if these committees are well-staffed, they will provide the strength and dynamism needed to launch our Society in our second decade. Please tell us what you think. During a series of discussions this summer, the Board members considered a number of topics related to our Society. The following is a partial list of "should we's."

1. Should we liaison with other conservation groups such as The Nature Conservancy, the Midwest Wildflower Research Center, the Entomological Society and others?
2. Should we develop a list of our members who would like to volunteer to give talks and field trips to schools, garden clubs and others?
3. Should we promote volunteer work with nature centers if they need help identifying wild plants?
4. Should we help State Agencies such as the Department of Natural Resources (DNR), Department of Transportation (Mn/DOT) and private organizations like The Nature Conservancy, manage critical land areas? Many of the Mn/DOT areas are very small and may be ideal projects for our members throughout the state.
5. Should we have out-state chapters of the Minnesota Native Plant Society? The Board said 'no' for now.
6. Should we develop a photo-library of native plant pictures? Where would it be housed?
7. Should we develop wild plant "preservation gardens" in Minnesota?
8. Should we consider money raising projects (selling native plant stationery, for example)?
9. Should we think about paying for a phone and someone to answer it? How about a permanent P.O. Box for our mail?
10. Should we seek corporate sponsors?
11. Should we begin an awards program -- honoring those who have done good things for native plants -- schools, corporations, garden clubs and individuals.
12. Should we invite others into our Society? We appeal to gardeners, photographers, educators and plant professionals. Should we welcome those interested in native plants and medicine, cloth dye, wildlife, poetry, music, jewelry, and so on? How do we find them?

These, and other thoughtful ideas, need to be considered by us all, so that we shape our Society to reflect our goals and the aspirations of our members. Again, please let us know what's important to you. You can reach me at:

Don Knutson

Leave a message, I'll call back!

Welcome, again, to a new year of native plant activity!



# The Wetland Conservation Act of 1991: A Brief Summary

*Don Knutson*

All of us in the Minnesota Native Plant Society will remember 1991 as the year of passage of this important act. Please take time to thank Senator Charles Davis and Representative Willard Munger, the sponsors.

This important legislation signals recognition of the importance of wetlands and their importance in conserving our water resources, maintaining and improving water quality, providing habitat for all organisms, reducing erosion run-off and stream sedimentation, and honoring the beauty of our Minnesota landscapes. Specific aspects of the new law include:

1. A requirement that state and local water plans identify high priority wetlands for preservation, enhancement, restoration and establishment.
2. That the Board of Water and Soil Resources, in consultation with the Commissioner of Natural Resources, adopt rules establishing criteria to determine the public value of wetlands.
3. Provides for compensation for landowners with Types 1,2, and 3 wetlands who apply to the Board of Water and Soil Resources. When the landowner gives a permanent easement, they will get a percent of the estimated market value for agricultural property within that county. In the metro area, landowners will get 50% of the market value of agricultural land and 20% for non-agricultural lands.
4. It includes provisions for the designation of wetland preservation areas, including the duration, procedures for early termination, limits on public projects and a tax exemption for land in wetland preservation areas.
5. Provides wetland establishment whereby a willing landowner may apply to have a wetland established or restored.
6. It defines regulations of wetland activities. Specifics are: calcareous fens may not be filled in, drained, or otherwise degraded unless under special approval of the Commissioner of Natural Resources. Other types of wetlands cannot be drained or filled unless replaced by restoring or creating wetlands of equal public value. Replacement is not required for wetlands that have been planted or harvested or that are under set-aside programs.
7. For the period between January 1, 1992 and July 1, 1993, state agencies or local units of government may not issue permits for draining, burning or filling a wetland, unless an exemption is provided.
8. The law details prohibited activities on ecologically significant peatlands and greatly restricts allowed activities.
9. It provides bonding authority and makes appropriations for conservation easements on wetlands and for restorations. A total of 13 million dollars in new and existing bonding is authorized along with 3 million dollars in general fund appropriations.

As copies of the law become available, we will want to read it to assure ourselves that Minnesota's native plants are included in these broad protective measures.

*Fall Color, continued from pg. 1*

There are many colorful shrubs. One of my favorites is the high-bush cranberry (*Viburnum trilobum*). It's bright red berries make delicious jelly and its leaves set the whole bush ablaze with their intense red color. It grows along streams and also at the edges of woods.

The hazelnut (*Corylus americana*) is best known for its edible seed. It is more somber than the high-bush cranberry, but is attractive when its leaves take on a pinkish tinge. It too grows along the edges of woods.

Winterberry (*Ilex verticillata*) is a holly that grows wild in Minnesota in swamps or in moist soil, but it will still grow in any good garden soil. While the leaves are still green, it sets bright red berries all along the branches. These stay on the branch after the leaves have fallen - hence its name - winterberry. It may grow to be quite tall. Both male and female plants are needed to ensure fruits.

Along the woodland paths one's attention may be drawn to the bellwort (*Uvularia grandiflora*) that often turns bright yellow early in the season while most other wildflowers are still green.

Another plant readily noticed is the blue cohosh (*Caulophyllum thalictroides*). Its intense blue seeds show above the divided leaves. It is a plant that needs little care and looks good all summer.

The baneberry (*Actea* sp.) fruits are also highly visible. As the common name implies, they are poisonous, so care should be taken if there are small children around. The species with the cherry-red fruits is *Actea rubra*. The true white species is *Actea pachypoda*, also known as doll's eyes. It has a large cluster of stark white berries each with a central black spot and a thick red stalk. The white form of *A. rubra* is not as clear a white and its stalks are much thinner, almost thread-like. The white form of *A. rubra* is the most common one in this part of the state.

The twelve-inch leaves of the mayapple (*Podophyllum peltatum*) can't be readily overlooked. Nor can the egg-sized bright yellow fruit that hangs from the fork of the two large leaves. It is said to be edible when fully ripe, "sweetly mawkish and full of seeds", by one description. "Eaten by pigs and boys" was Dr. Asa Gray's comment. Look for it in late summer and early fall.

It is the large-flowered species of trillium (*Trillium grandiflorum*) that draws the most attention in the spring. However, in the fall, its fruit is a drab brown, while our other species flaunt bright red, interestingly-shaped, capsules.

A sure sign of fall in the woods is the compact cluster of scarlet berries of the jack-in-the-pulpit (*Arisaema triphyllum*). The berries keep their bright color while still standing upright or even after falling to the forest floor.

The panicle of berries hanging from the end of an arched stem belong to the false Solomon's seal (*Smilacina racemosa*). In the group, you may find fruits of different shades as they turn from cream to pink to red-spotted, and finally a ruby-red.

In the true Solomon's seal (*Polygonatum biflorum*), the fruits are not at the end, but hang in twos or threes from the axils of the leaves along the arching stem. Its fruits are a dark blue.

Rosy twisted stalk (*Streptopus roseus*) is a smaller plant, but like the Solomon's seal, its fruits also hang from the leaf axils, one or two from each. It differs in that its fruits are a conspicuous cherry-red color.

The wild geranium is pretty well known. It is easy to grow and spreads readily. If conditions are right, it changes to an interesting pinkish shade before drying and fading.

So far, I have been dealing with plants of the deciduous woods. The north woods also display bright colors among its ground flora. The star-flower (*Trientalis borealis*) often starts to turn early. Some leaves of the "star" turn white, while others are pink or still green.

The bluebead lily (*Clintonia borealis*) has basal leaves somewhat like the stemless ladyslipper. It displays large "beads" of deep blue at the top of its ten inch stalk.

Reds are seen here and there below the evergreen trees. One that makes a Christmas picture of reds and greens is the bunchberry (*Cornus canadensis*). What seemed to be in the spring to be the center of one flower, was really a group of flowers, surrounded by whitish bracts. Now the bunch of red berries among the green leaves is quite striking. Unfortunately, in gardens, berries may not be formed if the necessary pollinator is not present. It is probably a beetle.

Not as demanding is the partridgeberry (*Mitchella repens*). It is a dainty, small-leaved plant that slowly spreads into a patch over logs in the woods. The leaves are quite similar to those of the twinflower, but can be distinguished by their central white vein. The scarlet berries seen all over the patch are formed from each set of two flowers joined at the base, making one two-eyed berry. It is a pleasant surprise to see the berries still bright red when the snow melts (that is if the "partridges" haven't found them). They are used extensively in the Glory Bowls sold at Christmas time. They also do well with other small plants in the north-woods terrarium.

Some of this information might be useful when selecting plants for a woodland garden. Thus the seasons of interest could be extended.

## Are You Really Buying Native Wildflowers?

*Roy Robison, Landscape Alternatives, Inc.*

People are interested in using native wildflowers in the landscape for many reasons, including: lower maintenance (less cutting, no special care needed), a more interesting display of unique plants (opportunity to have hardy plant species displayed throughout the year), and the reduction of using our limited resources (less watering, no fertilizing)

However, with the popularity of "wildflowers" everyone is trying to jump on the bandwagon and are using the term to describe a large variety of plant species. Before you purchase any "wildflowers", make sure that you know what you are buying. Listed below are some of the terms you might encounter:

**Wildflowers** - Is one of the most common terms used to describe a wide variety of plants. The term refers to plants that can grow without any special care. These plants may include plant species that were originally growing in an area or a introduced species. Some of these introduced "wildflower" species are aggressive and can displace native plant populations.

**Native plants** - Plants that grow without any care. The plant species can be native to a particular area, a state or even the country.

**Naturalized plants** - Plants that have escaped cultivation and have become established in the wild.

**Annuals** - Plants that grow, flower and complete their life cycle in 1 year.

**Biennials** - Plants that grow for 2 years before completing its life cycle.

**Perennials** - The foliage and leaves die back every winter, but its the root structure or the underground storage system that lives for many years.

**Short-lived perennials** - Plant species that may live for 2-3 years. Examples include Black-eyed Susan (*Rudbeckia hirta*) and Cardinal Flower (*Lobelia cardinalis*). These plants self-seed easily so the species can persist in an area.

**Cultivated perennials** - Exotic plant species that are used in landscapes because they have been bred or selected for improved colors, size, etc.

**Weeds** - Any plant growing where it doesn't belong. These plants are usually aggressive and difficult to remove.

The next time you look at a wildflower catalog or visit a nursery, don't be bashful about asking some questions about the plants or seeds. Most nursery owners, including myself, are proud of what they grow and offer to the public.

## *Native Plant Watch.....*

### Western Jacob's Ladder Search

*Roger Lake*

The Native Plant Society has helped organize and promote work days for Western Jacob's Ladder in 1989, 1990 and 1991. This year's trip was on July 13 and it involved 5 people from the Society, U.S. Forest Service, and the Minnesota DNR.

The object of our effort, *Polemonium occidentale* var. *lacustre*, is a midwestern variety of a western montane species. It is known to occur in three conifer swamps: two in St. Louis county, northeastern Minnesota, and one in Florence County, northeastern Wisconsin. The variety *lacustre* is listed under the federal Endangered Species Act as category 2, a candidate species for which additional information is needed on biological status and vulnerability.

On July 13, we first visited the Side Lake location of the plant, about 25 miles north of Hibbing. Of the three sites, Side Lake is the oldest (discovered in 1944, and relocated in 1988) and largest (10,000+ plants on about 200 acres). Northern white cedar is the dominant tree on this peatland, and *Polemonium* occurs in open, wet areas of the forest. The openness seems to be maintained by



*Elen F. 90*

Western Jacob's Ladder  
*Polemonium occidentale* var. *lacustre*



wetness, although the hydrological regime is not well understood. There is a small permanent trout stream flowing out of the peatland. The stream's water is very clear, with a pH of about 7.5 and total alkalinity of about 120 ppm, indicating groundwater discharge.

The Side Lake peatland is fairly large (about 1 square mile) and has appreciable slope (about 20 feet/mile). It lies at the foot of an area of glacial moraine and sand plain, the probable source of groundwater.

During our walk in the Side Lake peatland, we discussed how the cedar forest seems to be influenced by the underlying peat and its geologic and hydrologic environment. But we also took plenty of time to view and photograph the numerous orchids also present in the area.

After lunch we went to the Lake Leander site about 13 miles to the east. *Polemonium* was found there in June 1991. The Leander peatland is similar in being large and situated at the lower slope of a moraine and elevated plain. The peatland at Leander also has appreciable slope, and there are small streams issuing from it.

Both the Side Lake and Leander sites were logged decades ago by the old time loggers. However, much of the Leander site was also logged about 2 years ago, offering good opportunity to observe effects of canopy removal. The area was logged for pulpwood in winter, with slash piled and burned. Trees were predominantly black spruce, though some cedar and tamarac were also cut.

Two small patches of *Polemonium* were known to be out in the clearcut, and Steve Wilson found 2 more on July 13. The patches are 2 to perhaps 20 yd<sup>2</sup> in area and contain several dozen to more than 100 plants each. The plants in the patches occur at high densities and are very vigorous, with more flowering plants than are seen in areas with even modest tree canopy.

We also looked at a large *Polemonium* patch of at least an acre which straddles the cut boundary. Black spruce trees in the large patch are appreciably smaller than those logged, and the canopy is somewhat open. Interestingly, the large patch was typed as being in a small lower-volume, lower-density "inclusion" during the forestry inventory of the area.

All this prompted much discussion of why *Polemonium* is found on these sites and has not been found yet in other peatlands in Minnesota. We also discussed the desirability of long-term monitoring of the populations and the environmental factors which seem to be affecting them. It is clear that a good design will be difficult to develop. There are the usual problems of an observational study instead of a true experiment. Also, the great variation in densities and highly clumped distribution of the plant will be hard to handle.

All in all, it was an interesting day, and we did not miss the rain which soaked things the morning of the 1990 *Polemonium* field trip.

## The Field Trip to Weaver Bottoms - 3, August 1991

*Don Knutson (a landlubber) & Ellen Fuge*

It was a beautiful sunny day on the Old Zumbro River Channel. Eleven paddlers including the trip leaders Steve Eggers and Ellen Fuge, put in at the bridge on Co Rd 84 north of Weaver, MN. The group spotted wood ducks, egrets, great blue herons and little green herons. The wild rice, pickerel weed and arrow head were all in bloom. As we floated out of the river and into Weaver bottoms, a loose cluster of giant swallowtails greeted us. The high water levels into the growing season had reduced the size of the lotus stands in the lake and the spectacular show of two years ago was not there. But the few plants we did locate still flaunted their magnificent flowers.

Weaver Bottoms is a back water of the Mississippi River, formed by a dam, below Wabasha, Minnesota. We met at Weaver's Landing, and, after our fearless leaders determined the correct ratios of people, paddles and flotation devices, we arranged ourselves in the canoes. As we moved into the beautiful, still channel, Steve gave us each a copy of a plant key - with pictures - of coontail, pickerel weed (with its lovely purple/violet flower spike), the broad-leaved arrowhead (beautiful white flowers), duckweed, and the diminutive watermeal, *Wolffia columbiana* var. *karsten*, the world's smallest flowering plant (1.0 mm diameter).

While Steve and Ellen gave us learned talks, we water-proofed our lunch and did other survival things. Eventually we got a long way from the point of launch - I (Don) estimated it to be roughly 100 yards - when the captain called for lunch. We nosed the canoes into a tight, defensive circle and began tossing muffins between boats and within boats. A few were lost. Robin Fox ate the most!

Leaving the soft-stemmed bulrushes and giant bur-reed behind, we moved into the open water to enjoy the profusion of yellow and white water lilies and the spectacular lotus plants (*Nelumbo lutea*). The lotus has pale yellow flowers on stalks that reach about 1 foot out of the water. There were literally acres of them! Every canoe dispersed to its own version of paradise. I carefully guided ours over a stump which held us hostage for several minutes. Add to this the ducks, the frogs, the sea-gulls, the hills of distant trees, the fresh wind, and the fun of being on a field trip with kindred spirits, and you have an inkling of a wonderful water trip!

After surveying the lotus beds the group traveled to the Kellogg - Weaver Dunes Scientific and Natural Area for a hike through the dunes to see what might be flowering there. We did locate the rare Fame Flower (*Talinum rugospermum*) just as it opened in the late afternoon. The Regal Fritillary butterflies and some bright green tree frogs also added to a pleasant walk.

# MNPS Board of Directors Fall 1991

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Don Knutson

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Currently, there are two vacant positions on the MNPS board of directors. If you are interested in serving as a board member, please contact Don Knutson.

## Minnesota Native Plant Society Membership Registration Form

☐ Renewal      ☐ New Member

### Membership categories:

☐ Individual - \$10.00      ☐ Family - \$12.00  
☐ Student - \$8.00  
☐ Senior - \$8.00

Name \_\_\_\_\_ Phone \_\_\_\_\_

Address \_\_\_\_\_

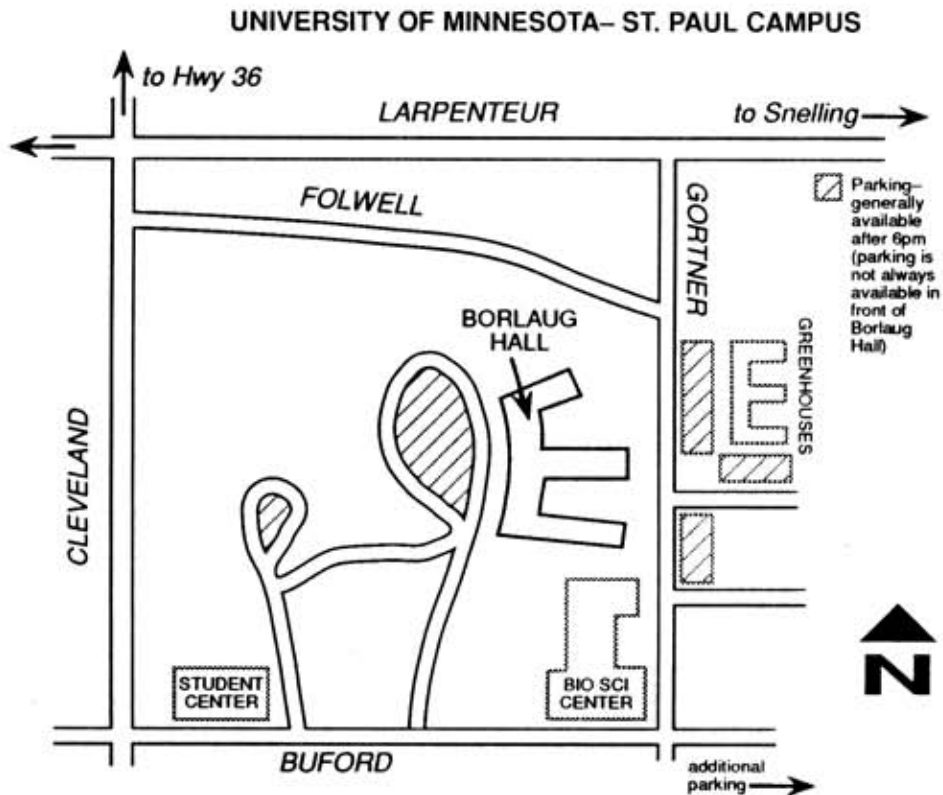
City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Checks can be made out to the Minnesota Native Plant Society. Please fill out above form and mail with check to:

Minnesota Native Plant Society  
220 Biological Sciences Center  
University of Minnesota  
St. Paul, MN 55108



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