



# Minnesota Plant Press

The Minnesota Native Plant Society  
Newsletter

Volume 16, Number 4

Summer 1997

## Upcoming Monthly Meetings

Minnesota Valley National Wildlife Refuge  
Visitor Center, 3815 East 80th Street

Bloomington, MN 55425-1600 612-335-2323

6:30-7:00 PM—Refreshments, Room A  
7:00-8:30 PM—Program & Society Business  
8:30 PM—Socializing  
9 PM— Doors close sharply at 9 PM

## Prairie Field Trips

Nancy Albrecht

**August 9** University of Minnesota Landscape Arboretum, Chanhassen. Tour of restored prairie and lecture. For details call (612) 443-2460.

Minnesota Department of Natural Resources (DNR) holds prairie day activities in state parks and School Nature Area Program sites. For details call (612) 296-6157.

**Deadline** for fall issue is September 15, 1997

**Fall meetings:** October 2, November 6, and December 4, 1997: programs to be announced

### MNPS Home Page

<http://www.stolaf.edu/depts/biology/mnps>

To pool rides to the **Minnesota Valley National Wildlife Refuge**, please call—well in advance—Grace Gray who will coordinate pooling

## MNPS Board met June 22 for annual retreat

The MNPS Board of Directors and officers met for 4 hours on Sunday, June 22, 1997 for the annual retreat. The annual board retreat provides an opportunity for board members—both outgoing and new—to get together for an extended period of planning, to elect officers and discuss major problems in some depth.

**Election of officers.** Charles Umbanhowar will assume the presidential responsibilities starting this fall. Pat Ryan was reelected treasurer and Chris Drassal was reelected secretary. Election of the vice president (who becomes president in the following year) was postponed until the September meeting of the board to give new and continuing board members more time to consider their interest in assuming this position.

**Committee chairs.** Dave Crawford was reelected chair of the Program Committee and Gary Perrault and Catherine Reed will be responsible for putting together program speakers for next year. Please contact them if you have a suggestion for a talk or if you would like to do a *Plant-of-the-Month* presentation. Charles Umbanhowar will undertake the duties of the Publication Committee and John and Jackie Buffalow will head up the Membership and Outreach Committee. We are still in the process of electing a chair for the Conservation Committee. Please feel free to contact these chair persons with any suggestions, questions, comments or concerns.

**Quarterly board meetings.** The board expressed satisfaction with the move to quarterly board meetings because this change allowed more people the chance to converse with other members during our annual meetings, as well as during our monthly meetings. This change means, however, that we will need to examine our constitution and operations manual to make necessary changes in times for electing officers, and other matters.

**Thanks to outgoing board members and officers.** Thanks were extended to outgoing members Char Bezanson (past president), Val O'Malley and Roy Robison. Thanks were also expressed to the many members who continue to volunteer their time and energy to help with mailings, memberships, field trips, and other important functions for the Society.

(continued on page 4, **Board retreat**)

## Editorial

### MNPS—Who are we?

The Minnesota Native Plant Society comprises a diversity of interests and vocations. What unites this diverse assemblage of people? Undoubtedly, native plants, either from an intrinsic interest in nature or for a commercial concern in making a living, or both, motivate people to participate in the MNPS. Regardless of interest, conservation and a love of nature may be the common thread.

Perhaps six groups can be identified. One is a group of academic plant scientists who teach and do research in colleges and universities in the state. A second group consists of plant scientists and technical persons employed in various federal, state, county, and municipal agencies. A third group is represented by those employed in business and industries such as floral shops, greenhouse enterprises, and landscape firms. A fourth group includes persons involved with writing, planning, teaching, and consulting about plants. Secondary school teachers and students interested in plants may comprise a fifth group. The sixth group makes up homeowners who are gardeners or are interested in native plants for their home gardens and yards, and, persons interested in natural history.

This means that as we plan programs, activities, and a newsletter, we should include topics attractive to all of these groups. Moreover, diverse viewpoints should be expected and tolerated. We need to know how native plants affect society both now and in the future. We need to become informed on issues and concerns that affect conservation of our native flora and fauna. Members and those who attend MNPS meetings have views that need to be heard. The Board welcomes participation in discussions and in service on committees, boards, or in other special assignments. We encourage readers to avail themselves of the many opportunities presented by the varied activities of MNPS.

### Wanted: MPP editor

**Position:** Editor of the MNPS Plant Press Newsletter

**Term:** One year with the option of renewal by the Board.

**Start date:** June 15, 1998.

#### Description of responsibilities:

The editor will be responsible for publication of the quarterly *Minnesota Plant Press*, the official organ of the Minnesota Native Plant Society. Duties include editing, assembly of articles, summaries of presentations and Society information. The editor will work with the Board on the newsletter and the Board is directly responsible for solicitation of articles and presentation summaries. The editor is also responsible for printing of the newsletter.

#### Qualifications:

We are looking for a MNPS member in good standing with demonstrated interest in native plants and extensive experience with plant science or Minnesota native plants, or both. The candidate should have a computer and access to word processors such as Word, WordPerfect or desktop publishing software. Internet access is desirable. Demonstration of good organizational skills and previous experience with publishing or writing is desirable.

**Closing date for nominations:** November 15, 1997

If interested in this position please present your credentials to the incoming MNPS president Charles Umbanhowar.

### MNPS Display Board Use

All members are welcome to show our display board at events, museums, and schools, if an attendant is present or it is safely displayed. This 3 by 5 foot, 2-sided board holds information on the Society, native plants, and stewardship. Request it from Don Knutson.

### The Minnesota Native Plant Society

#### Minnesota Plant Press

Thor Kommedahl, editor

Membership dues are \$10 per year for regular members and includes subscription to the newsletter; dues for students and seniors are \$8, for family \$12, for institutions \$20, and donors \$25. Checks can be made out to: Minnesota Native Plant Society, and sent to: Minnesota Native Plant Society, 220 Biological Sciences Center, 1445 Gortner Avenue, St. Paul, MN 55108.

Four issues are published each year.

#### MNPS Board of Directors

**President:** Char Bezanson,

**Vice-President:** Charles Umbanhowar,

**Treasurer:** Pat Ryan,

**Secretary:** Christine Drassal,

Deb Anderson,

Dave Crawford,

Gerry Drewry,

Thor Kommedahl  
Val O'Malley,

Gary Perrault,

Roy Robison,

*The Minnesota Native Plant Society is a tax-exempt 501 c3 organization as determined by the US Internal Revenue Service.*

## Elementary school project on prairie planting

This spring the students at St. Anthony Park Elementary School, with help from teachers and parents, planned and planted a small prairie in front of the school.

The project began in the fall of 1996, with students stratifying prairie seeds, and culminated in several days of planting in late May of 1997. The project was funded by donations from parents and St. Paul Community Education, and by a grant from SNAP (School Nature Area Program).

Nate Tracy, a 5th grade student, described the project in this article, which was originally published in the school newspaper.

—Marcie O'Connor

### PRAIRIE PROJECT

by Nate Tracy

This year we had another first, the Prairie Project. When asked why we planted a prairie, Mrs. O'Connor said, "I was making a butterfly garden and thought that a prairie was the best kind of a garden for butterflies, and we wanted to bring back the plants that grew here."

The Prairie Project was taken on by the "Green Team," a group of teachers, parents, and staff, who have been taking charge of the gardens around our school. The key people on the Prairie Project were parent Marcie O'Connor, ESL teacher Janeen Whitchurch, and Discovery Club leader Dan Clark. Students in the intermediate grades also work in a student Green Team.

A few classes—Ms. Mayer's, Ms. Polfliet's, Ms. Maguire's, plus two fourth grades—along with their classroom buddies from the primary grades planted the young prairie plants. Other classes cast seeds to start the grasses.

The fourth and fifth grade classes had grown the seedlings they planted. The process that we followed was first we scratched the seeds and put the seeds in a film canister, then put them in the refrigerator. This fooled the seeds

into acting as though they had weathered and had survived a winter. Second, we put the seeds in small pots and put them in the cart we have all seen in the library. We planted seeds of more than 40 different kinds of plants that used to live in the SAP neighborhood.

With this prairie Mrs. O'Connor hopes to attract insects like grasshoppers and butterflies. All of the 40 different plants can survive the winter. In about 3 years the prairie will look like a real prairie.

The planting was scheduled to start on May 16, but because of weather some classes couldn't plant until May 20! Mrs. O'Connor along with Mrs. Whitchurch and Mr. Clark and the students will make St. Anthony Park's first prairie a big success.

For more information on the project, please contact Marcie O'Connor,

### Guide to Spring Wildflower Areas

This MNPS guide prepared by Marilyn and J.B. Andersen, Jim Schuster, and John Moriarty has been updated, redesigned, and reprinted as the 1996 edition, and covers the Twin City natural areas. Vera Ming Wong prepared new illustrations. Purchase copies at regular meetings of the MNPS for \$3 each. To receive a copy by mail order, send \$6.50 (check or money order) to MNPS, c/o Char Bezanson, The School Nature Area Project, 1520 St. Olaf Avenue, Northfield, MN 55057. Make checks payable to MNPS.

### Plant sale was a success

The plant sale on June 3 generated income of \$489.50 compared with the sale in 1996 of \$283. The later date of this sale may have contributed to the increased interest and participation.—Pat Ryan, treasurer

## Plant Lore

### What is the cardinal flower?

The cardinal flower is *Lobelia cardinalis*, named after the Flemish botanist Matthias de l'Obel who anglicized his name to Matthew Lobel when he became a physician to King James I.

### Is it native to Minnesota?

Yes, but it grows mainly in the marshy banks of the St. Croix and Mississippi rivers along the Wisconsin border.

### What are its distinguishing characteristics?

Obviously, the intense crimson red flower spikes that are seen from July into September command attention. This makes it a popular garden plant, and it is attractive also to hummingbirds.

### What else is there about the cardinal flower?

Well, it is a perennial, has short rhizomes, and the plants overwinter as rosettes. The leaves are lance-shaped and toothed.

### What is the hummingbird relation?

The male stage of the flower precedes the female stage, and the flower appears to be adapted for pollination by hummingbirds and by daytime moths having long mouthparts. When the hummingbird inserts its tongue into the long red tube of the male stage to get nectar, its forehead picks up pollen which gets redeposited on the sticky female stage of the flower when it is visited.

### Are there any similarities with lobelia known also as Indian tobacco?

Indian tobacco (white to pale blue flowers) is *Lobelia inflata* which was smoked by American Indians to treat asthma and bronchitis. However, *L. cardinalis* has a much weaker effect. Incidentally, *L. inflata*, also a Minnesota native plant, contains *lobeline*—one of 14 alkaloids in the plant—that is used in commercial "quit-smoking" lozenges and chewing gum.



### Endangered plant species

The Center for Plant Conservation is a consortium of leading botanical gardens and arboreta in the United States. Its 28 member organizations store and maintain seeds, cuttings, and whole plants representing more than 500 of America's rarest plant species. This collection is known as the National Collection of Endangered Plants. (*New England Wild Flower* 1[1]: 6, 1997)

### Prolific cottonwood

Tiny seeds of cottonwood (500,000 per pound) disperse widely because of wispy tufts or trichomes attached to seed reports Mike Merigliano, ecologist at the University of Montana. Seeds are dispersed over 3 to 5 weeks and remain viable for about 2 weeks, so that 400 to 6,000 seedlings per acre survive at the end of the growing season. (*Kelseya* 10[3]: 1, 6, 1997)

### Aspen—native and hybrid

Aspen's ability to regenerate vigorously after disturbance and its adaptation to cool-temperate, boreal and montane ecosystems in North America make it the most economically important tree species in the Lake States. Information is available on the internet as <http://www.nces.umn.edu> under "research products". The two species in the breeding program are: *Populus tremuloides* (native) and *P. tremula* (Europe). (*NCNEWS*, February 1997 and *The Minn. Volunteer*, March-April, 1997)

### Virginia wildflower of 1997

The Virginia Native Plant Society selected *Chionanthus virginicus* as its "Wildflower of the Year".

### UM herbarium website

The University of Minnesota Herbarium has a web site at <http://biosci.cbs.umn.edu/herbarium>. It includes an annotated checklist for the vascular flora in the state, information on our online database, a checklist of the lichen flora, and more.—Anita F. Cholewa, Director, UM Herbarium, St. Paul.

### Wetland restoration workshop

An *Ecologically Wetland Restoration* workshop will be held July 31-August 2, 1997, at the Conway School of Landscape Design, 46 DeLamar Avenue, Conway, Massachusetts 01341-0179. (413)-369-4044; E-mail [workshop@csld.edu](mailto:workshop@csld.edu)

### Fire ecology

Controlled burning is being fostered to combat damage caused by years of fire suppression. Four times as many acres burned in 1994 as burned on average in the 1950s and 60s reports ecologist Wallace Covington. (*Earth* 6[4]: 36-41, 1997)

### Help needed for treats!

The MNPS Board thanks all who volunteered and brought refreshments to meetings in 1996-1997—a contribution much appreciated!

Again, we are requesting members to sign up to bring refreshments (finger food and one or more beverages—coffee is supplied by the MNWRCenter). If you would like to be a "breaker of the ice" by becoming the first "treat bringer of the year" for the October meeting, please call Dave Crawford at

Thank you.—Dave Crawford

**Audio tapes.** If you can't attend a meeting but would like to hear the presentation, you can purchase an audio tape of the meeting, starting with the one on March 6, 1997 (subject to permission by the speaker). Send a check for \$5 payable to the *Minnesota Native Plant Society* and a mailing label with your full name and address. Send check and meeting date selection to Dave Crawford,

Remember, tapes do not include visual material.

**Conservation issues.** Discussion was focused on the conservation mission of the Society and the degree to which MNPS should participate in issues related to conservation of native plants. We are often asked to take positions on the relative merits (or not) of different conservation-related issues. We decided that (1) MNPS would draft a standard letter stating the Society's preference for project alternatives on conserved native plants to be sent out in response to some of these requests and (2) MNPS would provide a mechanism, e.g. phone tree for interested members and a bulletin board, to inform members of ongoing issues that relate to native plants with the idea that part of our mission is to inform and educate our members to enable them to form their own opinion.

**Membership dues.** With some reluctance, the Board approved an increase in the membership dues of \$2 for all categories except for the patron level. This is the first increase in dues in more than 10 years and is necessitated by increases in postal costs and the fact that we are now sending out the postcard that notifies members of the upcoming meeting. The increase in dues will start for 1998.

### Newsletter and Symposium.

Next year we are hoping to publish several different series of articles in the *Minnesota Plant Press*. Possible topics may include classification of Minnesota regions and communities, natural history of selected native plant species, plant-animal interactions and ecotourism. Please contact Thor Kommedahl if you would like to write an article (MNPS pays \$50 for an original feature article). We also discussed ideas for a spring symposium that could focus on the paleoecology and glacial history of Minnesota. Anyone interested in helping with the Symposium is asked to contact Dave Crawford or Charles Umbanhowar.—Charles Umbanhowar

## Minnesota's Wetlands: Function and Diversity

Char A. Bezanson

**Wetlands**—No matter where you go in Minnesota, you are probably not far from a wetland, or land that once was wetland. When the last glaciers retreated from Minnesota 10,000 years ago, they left an uneven landscape full of massive chunks of ice, that eventually melted to form basins which then became lakes, marshes, and other wetlands. Wetlands fulfill a variety of functions. They control floods by slowing runoff and provide space for water to accumulate during the spring snow melt. They purify water by allowing rainwater and runoff to gradually soak into the ground, entering the ground water only after wetland plants have extracted nutrients and water has passed through many layers of wetland sediments. And they provide a diverse and biologically productive habitat for wildlife, producing as much plant and animal life as a similar-sized area of tropical rain forest.

An area is considered to be a wetland if it is covered by water for at least part of the year, has waterlogged soils, or supports water-loving plants. Although there are many different names for wetlands, Minnesota's wetlands can be grouped into five types: temporary wetlands, wet meadows, marshes, swamps, and bogs. Each Minnesota biome contains several types, although some wetland types are more likely to be found in forests, while others are more common in prairies.

**Temporary wetlands**—Vernal pool, ephemeral wetland, and flood plain forest wetlands contain water for only part of the year, and are among the state's most threatened wetlands. These wetlands were once common in the prairie biome, but many of them have now been drained for farmland, or filled for development. They support a wide variety of crustaceans, insects, reptiles, amphibians, and mammals, and are important food- and rest-stops for migrating birds.

**Wet meadows**—Sedge meadow, wet prairie, and fresh meadow are treeless open areas with wet or clay soils, often located near a high water table. They may or may not have standing water. Some have expanses of hummock-forming sedges, which make them look lumpy and slow water movement through the area. If the area is fed by mineral-rich ground water, an alkaline fen may develop; many rare plants occur in these areas. Wet meadows support a wide variety of flowering plants, many reptiles, amphibians, small mammals and birds, as well as wide-ranging mammals such as coyotes and moose. Large birds such as sandhill cranes feed on the abundant crustaceans, while owls and hawks prey on small mammals and birds. They may occur in association with lakes, rivers or with other wetland types such as marshes to form a large wetland complex.

**Marshes**—Slough, prairie pothole, pond, fresh marsh, and emergent marsh are what we usually think of when someone mentions a wetland. There is usually an area of open water that may be deep or shallow. Plants, often cattails or bulrushes, emerge from the water, and the arrow-shaped leaves of *Sagittaria* species may be common near the edges. Shallow marshes, which have more vegetation than deep marshes, may remove up to 90% of the nutrients and sediment from runoff water that passes through them. They store large amounts of floodwater, and support a wide variety of wildlife, including fish. Marshes are especially attractive to birds, including loons, ducks, geese, herons, and egrets. They are found in both prairie and forest areas of the state.

**Swamps**—Shrub carr, alder thicket, and tamarack/cedar/spruce/ash swamp are wetlands that include shrubs and trees. Swamps may spread out for thousands of acres, and are especially common in northern Minnesota, where they intermingle with lakes, streams, bogs, and marshes. Most form on top of decaying vegetation (peat) which builds up above the water table, providing the relatively dry substrate that trees need. Many wildlife species use swamps during part of the year; they provide winter shelter for deer, hares and grouse, and summer feed for moose. Many migrating bird species use swamps as rest stops, and woodpeckers search for insects in the abundant dead trees. Swamps are often pristine ecosystems, and support some of the state's rarest plant species, including ram's-head lady slipper and other orchids.

**Bogs**—Peatland, muskeg, and moor are wetlands that form on a thick mat of peat covered by a layer of sphagnum moss that builds up above the water table. The water in a bog is cold, oxygen-poor, and acidic; plants that do well in bogs are acid-loving plants such as cranberry, blueberry, bog rosemary, and Labrador tea. Bogs can cover large areas of land, and often include black spruce and tamarack stands. Orchids such as the pink lady slipper thrive there, and some plants compensate for the low availability of nutrients by consuming insects: pitcher plant and sundew are examples. Mammals that thrive in bogs include a variety of lemmings, shrews, and voles, as well as moose, lynx, black bear, and (in winter) deer. The great gray owl depends on the unique features of the bog, and birds such as sharp-tailed grouse, spruce grouse, red-tailed hawk, and a variety of smaller birds thrive there as well. Because they are relatively inaccessible and not suitable for agriculture, bogs are our most undisturbed wilderness. They occur most commonly in the coniferous forest biome of Minnesota.—Char A. Bezanson, School Nature Area Project, St. Olaf College, Northfield, MN 55057

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

NON-PROFIT ORG.  
U.S. POSTAGE  
**PAID**  
Minneapolis, MN  
Permit No. 2233

