

Minnesota Plant Press

The Minnesota Native Plant Society
Newsletter

Volume 13, No. 3

Spring 1994

Upcoming Monthly Meetings

335 Borlaug Hall—7:30-9 PM
St. Paul Campus

April 6.

Scott Zager—DNR County Biological
Survey: *Plant Geography of the
Minnesota Blufflands*.

Plant-of-the-Month: Douglas Owens-Pike,
bearberry (*Arctostaphylos uva-ursi*).

Board Meeting: 6 PM, Student Center.

May 4.

Photo contest show (see page 3, column 1
for details); plant sale.

Board Meeting: 6 PM, Student Center.

Spring and Summer Field Trips

See page 2 for schedules.

September 15

Deadline for Fall Newsletter

October 5

Start of the Next Season. Mark your calendar now.

Location change for 1994-95

The Board is negotiating for a change in location of MNPS meetings starting in October 1994 and into 1995. Central location with ample parking space, and little or no rental fees for space are considerations, among the options. Watch for a letter from the Board announcing the decision and the reasons for it.

Save Cedar Lake Park

A citizens' group that has made a difference
by Laurie Lundy

Little did the handful of neighbors that gathered in March of 1989 realize how quickly their vision for preserving a parcel of open space near downtown would come true.

In the shadow of Minneapolis skyscrapers, former railroad land is reverting to nature. Several foxes raised their kits, three pairs of bluebirds produced 17 young last summer, and ospreys were reintroduced into the new Cedar Lake Park. Many other species of birds and waterfowl, wildlife, trees, grasses, and wildflowers inhabit the area.

Citizen Group formed.—Early in 1989, the railroad posted "For Sale" signs on the former railroad switching yards on the northern edge of Cedar Lake in Minneapolis. And, a tiny group of neighbors started talking to anyone who would listen to ways of preserving this open space. They called a larger meeting in which 65 concerned citizens met to decide that the best way would be to preserve and develop the area into an urban nature park. They created a citizens' group—*Save Cedar Lake Park* (SCLP)—to lead the effort to preserve the woodlands and meadows that lie to the north and northeast in St. Louis Park. The area would add a 48-acre nature park to the Regional Chain of Lakes Park and provide an essential link to downtown, the new Riverfront Regional Park, and the western suburbs.

continued on page 5

The *Save Cedar Lake Park* story reprinted here gives conservationists a look-behind the successful birth of a new metropolitan park and natural area.

In early February, the *Minnesota Native Plant Society* Board received a request for support and help from a group that had been working on the project since 1989 on a major metropolitan conservation project that included a key role for Minnesota native forbs and grasses.

Because the *Save Cedar Lake Park* citizens' group was so successful in gaining support for Cedar Lake Park they were rapidly approaching a time when knowledge and expertise about native plants, prairies, seed and planting advice, and even donated native plants, could be a part of the volunteer help needed.

MNPS members interested in volunteering for this project can use the return form (page 7) or phone number to indicate interest in participation as a volunteer.—Chase Cornelius

Spring

1) **WARBLERS AND WILDFLOWERS.** TNC Nerstrand Big Woods Park Tour. Wednesdays, April 20, 27; May 4: 7:30 to 9:30 AM.

Join Kim Chapman and Nancy Falkum, Minnesota Chapter of the *Nature Conservancy*, for a walk in Nerstrand Big Woods State Park to see early spring ephemerals and migrating songbirds. Meet at the picnic/parking area. *Phone reservations are required.* Call Julie or Janet at

. Wear waterproof shoes and clothes.

2) **LICHENS OF THE ST. CROIX VALLEY.** Interstate State Park, Taylors Falls. Saturday, April 23; 10:30 AM to noon.

Explore the fascinating lichens that grow in the pothole area of Minnesota's Interstate State Park, with lichenologists Jim Schuster and Nancy Albrecht. Meet in front of the Interpretive Center. *Phone reservations are requested* by calling Jim at or Nancy at

(after 6 PM). Wear sturdy walking shoes.

3) **NATIVE PLANT NURSERY AND PRAIRIE TOUR.** Crow-Hassan Park Reserve, Hennepin Parks. Saturday, May 7: 9 AM to 1 PM.

Join John Moriarty of Hennepin Parks for a tour of the native plant nursery in the Crow-Hassan Park Reserve, and to a restored prairie in the park to search for early spring forbs. Meet at the Crow-Hassan Nursery. *Phone reservations are requested.* For directions and reservations, call

. Wear appropriate clothing and shoes.

Optional equipment for all three trips include cameras, binoculars, hand lens, and field guides.

No fees are required except daily or annual parking permits.

—Nancy Albrecht

Large clumps of 20 or more stems of showy lady's-slipper (*Cypripedium reginae*) seen in cedar swamps may be 100 years old or older, if rhizomes are undisturbed—W.R. Smith, 1993, *Orchids of Minnesota*.

Summer

1) **GOOSE LAKE PRAIRIE WALK.** Pennington County, July 9, 1994, 9 AM to 3 PM. Joint with *Nature Conservancy*—a 3-4 mile hike.

Marsh remnants surrounded by prairie types between two Lake Agassiz beach ridges. Bring bag lunch. Fred Harris (ecologist) and Steve Stucker (ornithologist) are leaders. Meet in front of Hardees in Thief River Falls, on north side of Hwy 59 at west end of city.

2) **"PRAIRIE SMOKE" Prairie Tour.** July 16, 1994. Join Deborah Anderson and Susan Gossman on a tour of 2 prairies near Chatfield, 20 miles south of Rochester on US Hwy 52. Meet at Chatfield City Park at 10 AM. Carpool to Tuohy Prairie at town's edge, eat a picnic lunch (your own), and go to Kark Prairie, 4 miles from Chatfield. *Reservations are requested by July 10.* Call

, or write Timothy Gossman,

3) **REDISCOVER THE URBAN PRAIRIE.** Twin Cities, Saturday, July 23, 10 AM to 3 PM. Bob Jacobson (MnDOT) and Dave Olfelt (MnDNR) will lead caravan to little-known prairies along the Mississippi and Minnesota Rivers in the metro area. *Reservations required.* Call Dave at for map, directions and other details. Bring lunch.

4) **GULLY FENS.** Polk County. July 30, 1994, 10 AM. Gully is near Bemidji, 1.5 hr drive from Itasca Park. Joint with *Nature Conservancy*. Gully Fen is a mixture of prairie and boreal forest fen species. A 2.5 to 4-mile hike. Nancy Sather (botanist/ecologist) is the leader. Take Hwy 92 north from Bagley. Gully is 1/4 mile north of 92 on Polk County #2. Meet at "Gully Mall"—old elementary school on south side of Gully. Bring lunch. No trails, no facilities; rough terrain, some wading—*Be prepared!*

5) **Minnesota Prairie Day,** site undecided, Saturday, August 13 (date tentative) (go to page 7)

The Minnesota Native Plant Society

Minnesota Plant Press
Thor Kommedahl, editor

Newsletter of the
Minnesota Native Plant Society

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.

Three issues are published each year.

MNPS Board of Directors

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

Designing Gardens with Native Plants—A Seminar

This seminar will be led by Cole Burrill at Maplewood Nature Center on April 26, May 3 and 10, 1994, from 7 to 9 PM.

Participants will become familiar with the variety of colors and textures of native wildflowers, ferns, and woody plants, and will create garden designs for their own yards. Native plant gardens attract butterflies, birds, and other wildlife to the yard.

For details consult Maplewood Nature Center, 2659 E. 7th Street, Maplewood, MN 55119, or call 612/738-9383.

Botany photography exhibition is set for May 4 and May 18

The *Minnesota Botany International* is an exhibition on photography of flowering plants, fungi, lichens, ferns, habitats and fossil plant life, and is sponsored by the Minnesota Nature Photography Club. The exhibition will be held Wednesday, May 4, 1994, 7:30 PM in Borlaug Hall, University of Minnesota, St. Paul, at the MNPS May meeting, and on Wednesday May 18, 1994, at 6:30 PM at the Minnesota Nature Photography Club, MN Valley National Wildlife Refuge, 3815 E. 80th St., Bloomington, MN.

The closing date for entries is April 20, 1994. The entry fee for four slides is \$4.50. Call or write Terry or Kathleen Schuller for an entry form or send slides, entry fee, and a note with your name, address and slide titles, to Minnesota Botany, 10632 Upton Avenue S., Bloomington, MN 55431.

MNPS 1993 treasurer's report

The checking account on 1 January 1993 was \$3,254.84, and on 31 December 1993 was \$3,619.95. Income was \$5,163.49 (mainly memberships and donations), and expenses were \$4,798.38. MNPS has CDs worth \$2,500.—*Ruth Phipps, treasurer*

Growing Native Flowers at Home—A Symposium

"Growing Native"—a public symposium on how, where, when, and why to grow native plants in the home yard—will be held on Saturday, April 30, 1994, from 8:30 AM to 3:30 PM.

Sponsored by Hennepin Parks and the Minnesota Native Plant Society, this public program will take place at Crow-Hassan Park Reserve, at the Hennepin Parks Nursery.

The cost to attend this all-day event is \$20 per person. This fee includes program, hand-outs, lunch, parking, a mixed prairie seed packet, and a wildflower seedling. A student discount is available.

Program topics that will be addressed include the importance of native plant biodiversity to humans and wildlife; where and how native wildflowers live and grow, habitat requirements, range, season of bloom, and pollination strategies; and, propagating and growing wildflowers at home—seed and plant material sources, growing requirements, how to plant, which types of plants are easiest to grow—and how to plan a native garden for your own yard.

There will be tours of the Hennepin Parks Nursery and wildflower plantings and displays from native plant businesses and organizations on the beauty of native wildflowers.

To make reservations, or for details, call Hennepin Parks at (612) 559-9000 or 476-4663.

The program is as follows:

- 8:00 Registration
- 8:30 Introduction (Welcome)
- 9:00 to noon Hands-on sessions on propagating native plants (Lois Larson), soil (Bob Mughas), tour of nursery (Tom Jahnke).
- 12:00 Lunch (buffet)
- 1:00 Natural History of Native Plants (Welby Smith)
- 1:40 Planning Native Plant Home Landscape (Diane Hilscher)
- 2:10 Break
- 2:20 Native Plant Controversies: Panel (Lisa Mueller, Karl Ruser, Becky Schirber).
- 3:00-3:30 Wrap-up/resources

Please renew your membership in Minnesota Native Plant Society now

There is still time to renew your membership and receive the MNPS Newsletter. Your continued support is important in the effort to build awareness of our Minnesota native plants and to let people know about the Society and the work it does to foster interest in our native species.

The year your membership is paid through is typed on your address label on the Newsletter. You can renew your membership today by mailing your check to MNPS. Membership fees and the mailing address are given in the box on page 2, column 3. Or, you can renew your membership at the next monthly meeting.

The Minnesota Native Plant Society appreciates your membership support and your participation.

Display Board of MNPS

All members are welcome to show our display board at events, museums, and schools, if there is an attendant present or it is safely displayed. With information on the Society, native plants, and stewardship, the two-sided board is 3 by 5 feet. Call Don Knutson.

A hold on scientific names

A resolution adopted at the 15th International Botanical Congress in 1993 in Yokohama, Japan, mandates taxonomists not to disrupt established names, not to resurrect long-forgotten names, and not to change the application of names, at least until the 1999 meeting, reports D.L. Hawksworth of the International Mycological Institute, Egham, England. (*Syst. Ascomycetum* 12[1-2]:1-6, 1993).

Mushrooms in Minnesota Old-Growth Forests

Our study of mushrooms in Minnesota old-growth forests began last summer. A major motivation was to obtain baseline data on mushrooms that grow in our old-growth forests so that data can be used to monitor forest health and environmental change. Equally important is to understand the biodiversity of mushrooms in Minnesota, and the nature of forest fungi before forests were extensively altered by humans. To understand the significance of the study we need to appreciate the roles of the macrofungi or mushrooms, the loss of mushroom species in Europe and its implications for North America, and the state of knowledge of mushrooms in Minnesota.

Macrofungi have important roles in forest ecosystems. Some are saprobes important in recycling wood and litter, some are parasites, and many are mycorrhizal. We focused our attention on mycorrhizal fungi because it was too large a task to study all mushrooms of the forest and because loss of these fungi in Europe preceded decline in the health of the forest. Many of these fungi are susceptible to ecosystem disturbance.

Dramatic declines in mushrooms in Europe in the last 20 years is attributed to air pollution, especially accumulation of nitrogen in forest soils and acidification. Red data lists exist for threatened and endangered mushrooms in many European countries. This decline in mushrooms in Europe is a warning that we need to understand the situation in Minnesota and what constitutes an unaltered forest ecosystem.

It is generally assumed that because we know a fair amount about numbers and distributions of vascular plants, the same is true for other plants and fungi. In fact, our knowledge of mushroom species and their distributions is poor for North

America. In Minnesota, our records show about 1,000 species of macrofungi; however, areas in Europe of comparable size to Minnesota contain 2-3 times this many species. There is also a correlation between diversity of vascular plants and numbers of fungi. Our flora is more diverse than areas of comparable size in Europe, and we estimate the number of species in Minnesota to be greater than 3,000. Only the central and eastern parts of the state have been studied extensively and documented for mushrooms.

There are no data for numbers and kinds of mushrooms on old-growth forests in North America, but two studies are in progress in the Pacific Northwest. Two types of fungal inventories are useful: intensive monitoring of plots for species composition and abundance, and general surveys (occasional visits in fruiting weather). The latter provides an incomplete view of fungi present and are not quantitative. Monitoring plots gives more complete data and is used in Europe to get data useful in assessing environmental change.

We anticipated a moderate number of mycorrhizal fungi in the old-growth forests, based on studies of second-growth forests. Our findings were different. Four sites were studied (1 and 2 were quantitative, 3 and 4 were qualitative): 1) Scenic State Park of old-growth red pine; 2) Tettegouche State Park, a northern hardwood-conifer forest; 3) Superior National Forest of white pine; and 4) Townsend Woods Scientific and Natural Area, a maple-basswood forest. Two plot designs were used to gather data.

(continued on page 7)

Summary of February Meeting Presentation at MNPS by Professor David J. McLaughlin and graduate student Patrick R. Leacock, of the University of Minnesota's Plant Biology Department, St. Paul Campus.

The Geology and Flora of Fens

Fens are an unusual type of wetland characterized by an organic soil (muck or peat), infiltrated by groundwater and home to many plant species, some found only in fens. Fens are of two basic types: rich and poor—classification varies among ecologists. Poor fens are acidic (pH<6.5), are nutrient poor (little calcium, magnesium, etc.), have weakly minerotrophic plants (grow in nutrient poor conditions), and have considerable *Sphagnum* moss; bogs are actually poor fens. True bogs are raised above the water table. Rich fens have a pH above 6.5, are nutrient rich, have minerotrophic species with fair to no amounts of *Sphagnum*.

Fens, like prairies, were maintained by fire, which helped keep willows (*Salix* spp.), dogwoods (*Cornus* spp.), bog birch (*Betula pumila*), red elm (*Ulmus rubra*), and other woody plants in check. Fire suppression has allowed trees and shrubs to take over some sites. Many fens have been lost to tiling of land for agriculture. Gravel mining, herbicides, and grazing are also threats. Ironically, many fens are extant because they occur in pastures, though the quality varies with the intensity of grazing.

Fens are dominated by sedges and grasses. In spring, fens show the cottony flowers of cotton sedge (*Eriophorum angustifolium*), the yellow blossoms of monkey flower (*Mimulus glaberratus*), and the ornate white flowers of bogbean (*Menyanthes trifoliata*). Early to mid-summer one finds the northern bog orchid and green twayblade, the yellow flowers of carnivorous small bladderwort (*Utricularia minor*), and the cyanide-producing arrow grasses (*Triglochin palustris*). Late summer to fall finds beak rush (*Rhynchospora capillacea*) and small nutrush (*Scleria verticillata*).

(continued on page 7)

Summary of January Meeting Presentation by Mark Loeschke, botanist, Rust Environment and Infrastructure.

Save Cedar Lake Park

Continued from page 1

Membership in SCLP grew rapidly. Committees sought donations, produced and sold T-shirts, wrote newspaper articles, prepared trail maps and other visuals, arranged tours, and attended endless meetings. Then some of the citizens approached the Minneapolis Park and Recreation Board which resulted in a citizens' committee studying the idea of a nature park with connecting trails.

Guidelines developed.—From early on, the group lived by a number of organizational guidelines. Some examples follow:

- Create a vision. Be bold. Base the vision on values and need. Be positive. Be for something rather than against something.

- Communicate the vision, the values, and the need. Communicate the message over and over, over and over, never stop.

Keeping these guidelines in mind, SCLP members attended a November (1989) public hearing of the Metropolitan Council Open Space Commission where many citizens and community leaders supported the project.

Fund raising efforts.—After that, *Save Cedar Lake Park* shifted into high gear. In January 1990, the group decided to raise acquisition money, and that summer, by consensus, the group agreed to privately raise one-third of the purchase price.

Over the winter, work continued on developing a broad base coalition of metro-area neighborhoods, legislators, and government agencies and organizations.

When the land owner began to actively market the property in March 1991, the citizens began a successful effort to educate state legislators. At the same time, the Minneapolis Chapter of the Audubon Society pledged their entire bird sanctuary fund to SCLP. The "birders" felt that Cedar Lake Park was the closest they would get to having a bird sanctuary close to downtown Minneapolis; they also wanted to show legislators how committed they were to saving this parcel of open space. By the end of the 1991 session, the Legislature, sensing the urgency and fearing loss of this valuable acquisition, approved the additional funding needed to purchase Cedar Lake Park in the cities of Minneapolis and St. Louis Park.

Land purchased.—As a result, fund raising efforts increased. In 23 months, the citizens raised nearly a half million dollars in cash and pledges. To purchase the property before the year's end, the James Ford Bell Foundation provided a grant and interest-free interim financing. And, because regional parks within Minneapolis are operated and maintained by the city, the Park Board purchased the land on 25 November 1992, with the private and public money the SCLP group had generated.

Further, the group was instrumental in negotiating a joint use/lease arrangement between Hennepin County Regional Rail Authority and the Minneapolis Park Board to add to the parkland 60 additional acres of adjoining Hennepin County land on the east side of Cedar Lake.

Organization and planning.—In February 1992, the Cedar Lake group and the Park Board formed an informal partnership. To achieve trail linkages between downtown and the new Riverfront Regional Park, Wirth Park, Bassett's Creek, and the western suburbs, the partnership submitted a grant proposal to the Legislative Commission on Minnesota Resources. The commission approved the proposal requesting funding for phase 1 of the trail development between Highway 100 in St. Louis Park and the Mississippi River in downtown Minneapolis, contingent on a substantial private match of funds, which the group had raised.

Shortly after that, a planning committee, including citizens and Park Board

staff, met weekly to develop design criteria for preserving open space.

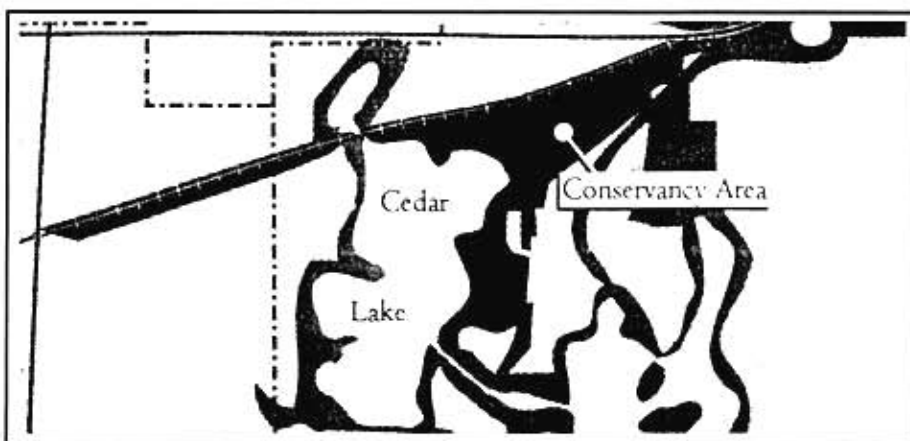
Meanwhile, federal money, with a local fund match, became available through the Intermodal Surface Transportation Efficiency Act. A small portion of that money is available for alternative transportation such as bicycle and pedestrian facilities. The Minneapolis Public Works joined the SCLP and Park Board partnership because they would ultimately be involved in trail construction. Thus, the three entities became the Cedar Lake Park and Trail Partnership.

Design and construction.—In 1993, the selection committee, consisting of representatives from SCLP, The Minneapolis Park and Recreation Board, and the Department of Public Works, interviewed four teams of designers and selected Jones & Jones/Richard Haag Associates to work with a local engineering firm. The contract was submitted and approved by the Park Board.

The first phase of construction in 1994 will be to create biking, jogging, and walking trails from the Cedar Lake road to 7th Street. At the same time parts of the north meadow will be developed into a prairie area.

Laurie Lundy is the Save Cedar Lake Park project coordinator. For more information, contact SCLP (612) 377-9522.

The original article *Save Cedar Lake Park* was printed in *Minnesota Cities* and has been condensed for the *Minnesota Plant Press* with approval of the author.



The ENDANGERED SPECIES ACT of 1973 will be amended in 1994

December 28, 1993, marked the 20th anniversary of the Endangered Species Act (ESA). The preamble to that Act stated that endangered species of fish, wildlife, and plants "are of esthetic, ecological, historical, recreational, and scientific value to the Nation and its people."

Amendments to this Act are included in the "Endangered Species Act Amendments of 1993" (H.R. 2043) which was not taken up last year but will be reintroduced in the new Congress, probably in April 1994.

Representatives Gerry Studds (D-MA), John Dingell (D-MI), and Jim Saxton (R-NJ) have introduced this bipartisan bill to strengthen and reauthorize the ESA.

The bill requires agencies to inventory candidate species on their lands, identify conservation measures which reduce the likelihood that species would need listing in the future, and authorizes agencies to enter into voluntary agreements with the Interior Secretary to conserve those species. Also, H.R. 2043 authorizes a study of federal laws and programs that are harmful to listed species or discourage conservation by private landowners.

Methods of implementation of the bill are included as well as strategies for funding and getting cooperation.

Instead of a species-by-species focus, this bill uses a more fiscally and ecologically sound ecosystem approach.

Plant and animal protection compared.—Under the Endangered Species Act, threatened or endangered plant species receive less protection than animal species on non-federal lands. The Act contains a provision that forbids killing, injuring, or harassing a listed animal or destroying its habitat. Plants, however, are protected on non-federal lands only by state laws, and 24 states have no laws to protect endangered species. (*AIBS Forum* 12[4]:2, 1993)

Endangered and threatened wildlife and plants listed.—Updated lists of federally listed threatened and endangered species and federal candidate plant species were published in September, 1993. This is a 40-page booklet listing all animal and plant species protected by the Endangered Species Act, and includes plants being considered for listing. Request copies from Zella E. Ellshoff, Botanist, Division of Endangered Species, US Fish and Wildlife Service, 1 Federal Drive, Fort Snelling, Minnesota 55111; telephone 612/725-3276.

Medicinal uses of plants has bearing on endangered species.—One-third of all pharmaceutical prescriptions are based on substances derived from plants or synthesized in imitation reports Dr. Thomas Eisner, Director of the Cornell Institute for Research and Chemical Ecology, at a Congressional hearing on the Endangered Species Act. He also noted that as technological capabilities increase in the future, more beneficial chemicals may be discovered. The hearings were sponsored by a House Merchant Marine Subcommittee on Environment and Natural Resources, chaired by Gerry Studds (MA). (*AIBS Forum* 12[4]:1, 1993.)

Global considerations of the bill.—Internationally, H.R. 2043 improves implementation of the Convention on International Trade in Endangered Species (CITES) by clarifying that federal agencies are authorized to issue appropriate regulations to implement CITES to stem illegal trade in endangered species.

Congressional support for H.R. 2043.—As of September 1993, 93 Representatives and 15 Senators in Congress have signed as cosponsors, according to the Minnesota Audubon Council. Minnesota cosponsors include Representatives Collin Peterson, Martin Sabo, and Bruce Vento and Senators David Durenberger and Paul Wellstone (S 921 is the Senate bill).

—Rick Jannett collected and contributed materials for these two columns.

From the Cedar Lake Park & Trails Statement of Philosophy

(see pages 1 and 5)

RECONSTITUTE a variety of native plant communities which reflect lake, wetland, prairie, savannah, woodland and forest ecosystems.

- Convert and maintain the large open expanse to the north and northeast of Cedar Lake primarily as oak savannah (native grasses, flowers, and scattered oak trees).

- Manage the upland areas currently containing mature oak trees primarily as oak woodlands with prairie openings.

- Enhance and expand the wetland communities along the lakeshore particularly in those locations where storm water runoff is most likely to occur.

- Reestablish/establish additional wetlands (ephemeral ponds, wet meadows, marshes and/or streams), based upon historic evidence and the suitability of the topography and soils to the extent possible.

- Plant red cedar trees as individuals or in small groupings in the drier portions of the park and along the commuter trail corridor(s).

- Plant white cedar and tamarack trees near the lakeshore.

Conservation Committee of MNPS elects Bristow chair

At a meeting called by Rick Jannett at the Science Museum, in St. Paul, on 17 February 1994, Charles Bristow was elected chair. The Committee discussed several areas of interest including the reauthorization of the *Endangered Species Act* (see columns 1 and 2 on this page). The next meeting will be Thursday March 17 at 7 PM. For more information, call Charles Bristow.

(Mushrooms ...continued from page 4)

Data were collected so as to adequately document the species. There are no general keys for mushrooms of eastern North America, so that final identification required microscopic examination and extensive analysis of the literature.

Pat Leacock presented information on field plots and showed slides of many mushrooms found at Scenic and Tettegouche State Parks in August and September 1993. At Scenic State Park, *Laccaria laccata* var. *pallidifolia* was the most frequent species, and the only one found at all four sites. The most important genera in species diversity were *Cortinarius* (Cortinariaceae) and *Russula* and *Lactarius* (Russulaceae) with 15-18 species in each genus. At Tettegouche State Park, *Clavulinopsis fusiforme* and *Hygrocybe cantharella* were the most frequent species and the Hygrophoraceae and Entolomataceae were the most important families, each with 15 or more species.

We anticipated finding 25 to 50 mycorrhizal species, but we found 99 mycorrhizal species in the red pine forest and 71 in the northern hardwood-conifer forest. Neither study is complete. Some species could not be documented adequately with the small amount of material available and no site was completely sampled throughout the fruiting season. In the four sites, 192 species were found, with 26 of these species shared between sites and only one species occurring in all four sites. We expect that 75-100 of these species will be new state records. In 1994, we plan to sample each site to get a full season of data, and to compare mature and old-growth forests. Old-growth forests in the state appear to have a high diversity of fungi similar to that reported in the Pacific Northwest. Old managed plantations in Europe apparently have low diversity, suggesting the need to maintain tracts of undisturbed forests for future generations.

Geology and Flora of Fens

(continued from page 4)

A fen's best show is in fall, with the creamy flowers of grass-of-Parnassus (*Parnassia glauca*), the purple-blue and white of Kalm's lobelia (*Lobelia kalmii*) and the exquisite blue of fringed and lesser gentians (*Gentianopsis crinita* and *G. procera*).

Field Trips

(continued from page 2)

Call DNR for details: 296-6157, or 1-800-766-6000.

6) **Savage Fen Wetland Complex**, Savage, MN, Saturday, August 27, 10 AM to 2 PM. Led by Steve Eggers (Corps of Engineers) to 112-acre parcel of land newly acquired by USFWS. There are 45 acres of calcareous fen with 7 state-listed plant species. Compare management with adjacent 26-acre site intensively managed since 1986. Small mesic prairie also. Call Steve Eggers for directions and map.

For all trips, be prepared for rain, mud, and insects; bring lunch, field guides, lenses, binoculars, as usual. Check on reservations. Enjoy!

—Nancy Albrecht and B.J. Farley

Prairie Smoke—organized to restore and maintain prairies

In March 1993, 30 people in southeastern Minnesota organized to study, restore and maintain prairies, and named the organization *Prairie Smoke*, after the wildflower and to symbolize fire as a means to revitalize remnant prairies.

Activities in 1993 included planting a native wildflower butterfly garden, burning some lands, preparing a video of native plants for donation to the Chatfield Public Library, preparing a third-acre site for seed production for planting prairies, encouraging the Fillmore County Highway Department to seed a 3-mile road improvement project with native grasses and wildflowers, and organizing field trips to prairies during the season.

A "burn wagon" will be constructed for use in controlled burns this summer. This will be a 2-wheeled trailer holding a water tank, pump, hose and burn equipment such as backpack pump cans, swatters and rakes.

Pasque flowers bloom here in spring, small purple fringed orchids in summer, and bottle gentians in fall, as examples of local prairie flora.

A field trip with MNPS is planned for July 16, 1994, see page 2, col. 2.

—Timothy M. Gossman

To Volunteer for the SCLP project, fill out this form and mail it to

Name _____ Phone _____

Mailing address _____

I am interested in learning more about how to help as a volunteer:

• I would like to work with native plants _____

• I have experience in selecting native plants for specific sites _____

• I would like to donate Minnesota native plants I have grown _____

• I am particularly interested in _____

Minnesota Native Plant Society

