



# Minnesota Plant Press

The Minnesota Native Plant Society Newsletter

Volume 27 Number 4

Summer 2008

## Monthly meetings

Thompson Park Center/Dakota Lodge  
Thompson County Park  
360 Butler Ave. E.,  
West St. Paul, MN 55118  
651-552-7559 (kitchen)

## Programs

The MN NPS meets the first Thursday in October, November, December, February, March, April, May, and June. Check the website for more program information.

6 p.m. — Social period

7 – 9 p.m. — Program, society business

**Oct. 2:** Program and Plant-of-the-Month to be announced.

**Nov. 6:** Program to be announced.  
**Seed exchange** to be held following the program.

**Dec. 4:** Program and Plant-of-the-Month to be announced.

**Feb. 5:** Program and Plant-of-the-Month to be announced.

**Mar. 5:** Program and Plant-of-the-Month to be announced.

## Prairie conference is Aug. 4 - 8 in Winona

The 21st North American Prairie Conference will be held at Winona State University Aug. 4 to 8. For information or to register, go to <http://bio.winona.edu/NAPC/index.htm>

## MN NPS website

For current information about MN NPS field trips, meetings, and other events, check the website: [www.mnnp.org](http://www.mnnp.org)

# The mystery of the elms in the Kandiyohi forest

*by Mark Stennes, plant pathologist with S & S Tree Specialists, and Lee Frelich, research and associate director of the University of Minnesota Center for Hardwood Ecology. This is an abstract of their presentation at the April 3, 2008 MN NPS meeting.*

An unusual forest dominated by elms, especially rock elm (*Ulmus thomasi*), but with some American elm (*Ulmus americana*) and red elm (*Ulmus rubra*) in central Minnesota, just south of the town of Kandiyohi was highlighted. This is also the only old growth elm forest we have seen, with trees up to 250 years old. A lush ground layer is present, probably because the deer herd is kept at eight to 10 deer per square mile. The site also has archaeological and historical significance with artifacts from Native American and European settlements and the first house built in the area. Also present is “Capitol Hill” between the tracts of forest, which was at one time slated to be the site of the Minnesota State Capitol.

Stennes talked about Dutch elm disease and the normal epidemiological model that should have resulted in the near complete destruction of this forest in the 25 to 30 years that the pathogen has been present on the site. All three elm species that dominate the site are normally susceptible, but the mortality due to Dutch elm disease is abnormally minimal. The probability of natural genetic resistance appearing in all three species on one site at one time, without evolutionary exposure to the pathogen, is fundamentally zero, so how are the trees surviving? There is certain to be a combination of factors, but pests/parasites of the insect vector is potentially one, while fungus competition, suppression and/or

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# Constitutional amendment would aid environment

Wildlife habitats are among areas to be protected if Minnesota voters pass the Clean Water, Land and Legacy Amendment to the State Constitution Nov. 4.

The amendment, which was discussed in the State Legislature for more than 10 years, would increase the state sales tax 3/8 of 1 percent, generating about \$276 million per year for 25 years.

The new revenue would be divided as follows:

- 33 percent for water quality;
- 33 percent for wildlife;
- 19.75 percent for arts funding;
- 14.25 percent for parks.

The Legislature passed the proposed amendment in February. Constitutional amendments do not need the governor's approval, but go directly to the voters. A "yes" vote on more than half of all ballots cast in the November election is necessary for an amendment to be passed. Blank ballots are "no" votes.

Former Sen. Bob Lessard, DFL-International Falls, started the campaign for hunting and fishing funds in the late 1990s. The original proposed amendment was similar to one passed in Missouri in the 1970s that has provided dependable revenue in that state. The federal government has mandated that states clean up their waters, and this amendment would provide funds to do that. Arts funding was added during the legislative debates to broaden support for the amendment.

The proposal is backed by groups representing environmentalists, hunters, anglers and the arts. Opponents include the Taxpayers League of Minnesota, which says the tax increase is "bad fiscal policy."

## Minnesota Native Plant Society's purpose

*(Abbreviated from the bylaws)*

This organization is exclusively organized and operated for educational and scientific purposes, including the following.

1. Conservation of all native plants.
2. Continuing education of all members in the plant sciences.
3. Education of the public regarding environmental protection of plant life.
4. Encouragement of research and publications on plants native to Minnesota.
5. Study of legislation on Minnesota flora, vegetation, ecosystems.
6. Preservation of special plants, plant communities, and scientific and natural areas.
7. Cooperation in programs concerned with the ecology of natural resources and scenic features.
8. Fellowship with all persons interested in native plants through meetings, lectures, workshops, and field trips.

# MNNPS Board of Directors

**President:** Scott Milburn, scott.milburn@mnnps.org

**Vice President:** Shirley Mah Kooyman, shirley.mah.kooyman@mnnps.org

**Secretary:** Sean Jergens, sean.jergens@mnnps.org

**Ken Arndt**, board member, field trip chair, ken.arndt@mnnps.org

**Peter Dziuk**, board member, peter.dziuk@mnnps.org

**Daniel Jones**, board member, daniel.jones@mnnps.org

**Beth Nixon**, board member, conservation committee chair, beth.nixon@mnnps.org

**Erika Rowe**, board member, erika.rowe@mnnps.org

**Russ Schaffenberg**, board member, russ.schaffenberg@mnnps.org

**Treasurer:** Ron and Cathy Huber, ron.huber@mnnps.org

**Linda Huhn**, program coordinator, 612-374-1435

**Listserv Coordinator:** Charles Umbanhowar, ceumb@stolaf.edu

**Field Trips:** fieldtrips.mnnps@mnnps.org

**Memberships:** memberships.mnnps@mnnps.org; 651-739-4323

**Historian-Archives:** Roy Robison, historian-archives.mnnps@mnnps.org

**Technical or membership inquiries:** contact.mnnps@mnnps.org

**Minnesota Plant Press Editor:** Gerry Drewry, 651-463-8006; plantpress.mnnps@mnnps.org

## Reminder:

Do not take plants from the wild. It is against the law to take plants from public property. Enjoy them where they are. Plants can be taken from private property only with the permission of the property owner.

## Kandiyohi forest

*Continued from page 1*

disease of the pathogen is another. However, something bigger and certainly more complicated from an ecological point of view is happening in this unique elm forest.

Recent work with elm cultivars has shown that there are several genetically controlled defensive mechanisms that the trees can employ against the Dutch elm disease pathogen, and, although very rarely, can combine and occur in American elm at levels high enough to impart a substantial level of tolerance. 'Princeton' and 'Valley Forge' are two cultivars of American elm that are becoming available in the trade and can be fairly characterized as tolerant of Dutch elm disease.

Frelich talked about past and future significance of this forest. It might be a relict of a much more extensive forest that, as indicated by the paleoecological record, covered millions of acres in southern Minnesota, Wisconsin, Iowa, and Illinois 9,000 years ago. As the climate warmed towards the mid-Holocene optimum (7,500 years before present), the elm-oak forest largely disappeared. It was likely replaced by savanna and prairie as fire frequency increased in the warming climate.

Then the climate began to cool, and remaining elm forests were replaced with sugar maple as it migrated west. However, three tracts of Kandiyohi forest were on peninsulas or surrounded by lakes so that the prairie fires may not have reached them during the warm period, and also sugar maple did not quite make it to the area during the period of cooling climate. Thus the Kandiyohi elm and oak forest could have remained as a relict from ancient times. Studies

## Annual plant sale goes on in spite of severe weather

"It was a dark and stormy night," but 40 dedicated members came to the 2008 plant sale and brought or purchased plants. The event was held in the entry area of Dakota Lodge.

There were no auction plants this year. Proceeds were \$450. Last year's total was \$842.

Ken Arndt was committee chair; Dave Crawford was the expert who identified plants and priced them.



**Dave Crawford and Linda Huhn, program coordinator, explain the plant sale logistics. Photo by Richard Johnson.**

of sedimentary deposits would be necessary to confirm this hypothesis, since it is also possible that the elm forest disappeared for a while and then came back.

In addition to rock, red and American elms, the Kandiyohi forest also has hackberry (*Celtis occidentalis*), American basswood (*Tilia americana*), green ash (*Fraxinus pennsylvanica*), Kentucky coffeetree (*Gymnocladus dioica*), bur oak (*Quercus macrocarpa*) and bitternut hickory (*Carya cordiformis*). All of these species have a maximum abundance in eastern Kansas, which is the same

## Youth groups are collecting one million acorns

The Million Acorn Challenge is a five-year effort by Great River Greening to restore oak savanna communities across the Twin Cities by planting a million acorns by 2010. Youth groups in grades six to 12 are invited to help them reach this goal by collecting acorns.

The group that collects the most acorns between Aug. 18 and Sept. 17 will win \$500 in cash prizes and eco-adventures. The prizes will be awarded at the Great Weigh-In and Planting Party at Afton State Park on Sept. 20.

The Million Acorn Challenge is open to school, faith-based, community, and neighborhood youth groups, as well as Boy Scout and Girl Scout troops.

Acorns can be collected from Aug. 18 through Sept. 17 on public or private property, but participating youth must have permission from the landowner before they remove acorns from any site.

Great River Greening has approval from the City of Saint Paul Parks and Recreation Division to collect in Saint Paul public parks; groups that collect in these parks will receive a collection permit once they register. Groups collecting outside this area will receive a permission request letter to use when contacting city or county landowners.

Pre-registration is required by Aug. 1. Contact Mark Turbak at 651-665-9500, ext. 11, or e-mail [mturbak@greatrivergreening.org](mailto:mturbak@greatrivergreening.org).

climate Minnesota may be headed for by the end of the 21st century, if climate mitigation is not successful. The Kandiyohi forest is therefore an ecosystem blueprint for forests that might exist or be created in much of Minnesota in a future warmer climate.



## Introducing Erika Rowe, MN NPS board member

Erika Rowe, the Society's newest board member, is a plant ecologist with the DNR's Minnesota County Biological Survey. She has worked for the DNR since 2001 — five of those years with MCBS. The focus of her current work has been on native plants and plant communities of west-central Minnesota.

She currently lives in South Minneapolis. Erika grew up in St. Paul and then spent eight years exploring and living in California, Colorado, and Utah. Ultimately, this Western wanderlust motivated her to move back to the Midwest and study what she loves most: natural resources, ecology and conservation.

Erika has been a member of MN NPS for almost one and a half years. She decided to become a board member because she felt she wanted to take it one step further and be a part of this growing society of varied and remarkable individuals, and help the Society continue to grow to its finest potential.

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## Phenology data being collected

The USA National Phenology Network is facilitating systematic collection and free dissemination of phenological data from across the United States. Their primary purpose is to support scientific research concerning interactions among plants, animals, and the lower atmosphere, especially the long-term impacts of climate change. Additional information, including local lists of plants they are studying, is on the network's website, [www.uwm.edu/Dept/Geography/npn/mission.html](http://www.uwm.edu/Dept/Geography/npn/mission.html)

## Thor Kommedahl receives lifetime membership award

*by Gerry Drewry*

In appreciation of his years of service to the Society and his work with native plants, Thor Kommedahl was awarded a lifetime membership in the Minnesota Native Plant Society April 5, during the symposium.

Thor joined the Society in the early 1990s, when he learned about the young organization. Because he had edited other newsletters, he was soon asked to edit the Minnesota Plant Press. He changed it from a mimeographed or copied collection of unedited articles to a professional-looking newsletter. He served as editor through 1998.

Since then, Thor has proofread every issue of the newsletter. He has been especially helpful in catching misspellings of Latin names and errors involving botanical rules, botanical capitalization and grammar.

Thor served one term on the MN NPS Board of Directors, participated in field trips and symposiums, and attended many meetings.

Before coming to Minnesota, he taught two years in Ohio. In 1990, after 44 years at the University of Minnesota, he retired as a professor in the Department of Plant Pathology. Thor taught about diseases of plants and pesky plants — weeds and poisonous varieties. He taught veterinary medicine students about plants poisonous to animals.

Thor still conducts two-day workshops for the College of Education, teaching elementary school teachers and graduate students about the plants of Minnesota. He has conducted these workshops in Rochester, at the Minnesota Valley Wildlife Refuge Visitor Center, and at the St. Paul campus. He shows

teachers plants that are in their schoolyards. During one field trip to several Minneapolis schools, he showed skeptical participants, who thought nothing grew by their buildings, about 100 different plants and trees.

He also volunteers one day every week at the Science Museum of Minnesota, preparing a website, “Boghopper,” for secondary math and science teachers.

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## New baby boom to increase pressure on environment

*by Gerry Drewry*

A record number of babies — 4,315,000 — were born in the United States in 2007. The previous record was in 1957, at the height of the baby boom. The country's overall population is now nearly double that of the 1950s, but the birth rate has slowed. Then the average mother had about four children; now that average is close to two. Immigration has been a major factor in this baby boom.

Mark Mather, demographer from the Population Reference Bureau, talked about environmental effects of this baby boom. “We already have scarce resources in a lot of areas,” he said. “It's going to affect, potentially, our water supply, the quality of our air. Places that are already crowded are probably going to get more crowded in the future.”

This outlook makes the mission of the Society even more urgent — “education of the public regarding environmental protection of plant life.”

## Maps of native plant communities are available

The Minnesota County Biological Survey has prepared maps or provides electronic data about many of the native plant communities in Minnesota. In addition, MCBS has published a report of their work in the Minnesota River Valley.

This report, "Native Plant Communities and Rare Species of the Minnesota River Valley Counties," includes a CD with two series of maps of the region. To obtain a copy, contact MCBS at 651-259-5100, or [ecoseervices@dnr.state.mn.us](mailto:ecoseervices@dnr.state.mn.us) or write to:

Division of Ecological Resources  
Minnesota Department of Natural Resources  
500 Lafayette Rd., Box 25  
St. Paul, MN 55155

To download maps or to see a list of printed maps that are available, go to the DNR website, click on Maps and scroll down to the bottom of the page.

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## Symposium has net profit of \$2,512

*by Gerry Drewry*

Treasurers Ron and Cathy Huber report that the net proceeds of the April 5 symposium were \$2,511.52. Dues totalling \$3,361 were the largest source of income from Jan. 1 to June 30, 2008. During that period, income exceeded expenses by \$5,448.

The Society has total assets of \$27,725, including \$8,361 in CDs.

As Scott Milburn wrote in the adjoining column, the MN NPS Board of Directors is discussing the most effective ways in which to use some of this money. Members are invited to send their suggestions to Scott at [scott.milburn@mnnps.org](mailto:scott.milburn@mnnps.org)

## President's column

# Conservation beyond Minnesota's 150 years

*by Scott Milburn*

This year marks an important milestone in the history of Minnesota, as we celebrate 150 years of statehood. In that time, the Minnesota landscape has seen many changes as a result of industry, agriculture, and overall development. While I have only lived in Minnesota the last seven years, I have come to truly appreciate its natural history. There is no greater feeling than traveling around the state, encountering the rich flora. It is easy to focus on the negative aspects of anthropogenic landscape changes, but we need to remember that there is still much around us. In looking at my own appreciation of the Minnesota landscape, I have to consider whether this appreciation would have developed had my profession been different. The reason to evaluate this point is that most people do not have an occupation that requires them to know much about natural history.

This point is important to ponder, because we need to consider how others view the natural world around them. Perhaps we can generalize and state that most folks do care about these things, but they just don't have the knowledge or experience to appreciate them to the fullest. These are the folks that we need to attract. Our approach should be to open the door for these individuals, showing them an entire world they would have ignored except for the occasional weekend camping trip. I feel we have a lot to offer for an organization that is run entirely by volunteers.

As stated in other columns, we need to stick with what works. Programming and field trips are pivotal to the success of the Society, but we need to look at new ways to attract members. It can be debated whether we are too technical as an organization or not technical enough. The programming over the last several years has had a nice balance of pieces that serve to inform the Society very well. Our programming chair, Linda Huhn, has done a nice job of setting up the programs, and I look forward to what is in store this upcoming year. Field trips are another thing we do very well. To those leading field trips, we thank you for doing so. Your efforts are appreciated, especially our field trip coordinator, Ken Arndt. New field trip ideas are always welcomed.

In the upcoming year, the board will be tackling the issue of how to grow while keeping within the mission set forth by the Society founders. We will be looking at such issues as online outreach and the obvious problem of excess funds. We have quite a few opportunities to do some great things with these funds, and we will be sure to share these with you in upcoming newsletters. All of these issues come back to our mission and the issue of conservation.

We need to keep discussing and promoting the issue of conservation as we surpass 150 years. Minnesota has numerous natural resources that are quite special and need to be preserved for the future. What should be the role of our Society in that preservation?



## Book review

# ‘Bringing Nature Home’

*Bringing Nature Home: How Native Plants Sustain Wildlife in Our Gardens*, by Douglas W. Tallamy, published by Timber Press, Inc., Dec. 2007.

*Reviewed by Joel Dunnette, former MN NPS president.*

I’m a nature nut, and I enjoy native plants for themselves and for their embodiment of our place in the world. I started liking native plants for the wonder and variety of interesting insects they attract and support. But I now have another reason to plant, maintain and encourage the use of native vegetation.

In *Bringing Nature Home*, Dr. Tallamy explains in an entertaining way how the diversity of our native plants supports a much wider variety and volume of insects than non-native plants. So why should people care about this? Well, although more people enjoy birds than insects, the availability of an abundance and variety of insects is critical to birds as they raise their young. Baby birds eat a lot — and insects are what they mostly eat.

Gardens of exotic flowers are starving the wild birds so many of us love. Yards of mowed grass, with a few non-native shrubs, are no place to raise a bird family.

Native plants have evolved to live with native insects. Each species has its own kinds of insects that live on and with it. These insects not only use native plants, but do so without destroying them. Native plants support production of two to five times more insect food than do non-natives. Non-native flowers are unfamiliar to our insects, and may be “pest free,” but what many people call pests are essential to raising young birds. In fact, most insects are not harmful to humans or crops. We assume guilt by association, so most people try to kill nearly every insect they see. This harms the birds we love!

If we want a world filled with wonder and a variety of creatures, and we continue to take up nearly all productive land with our houses and shopping malls, then we need to provide the native plants that are essential for the survival of the species we value.

This book is full of useful information, but is also fun to read. Dr. Tallamy is an entomologist who truly loves nature, and clearly communicates that love. If you care about birds even a little, you will enjoy reading this book.

## Volunteers are needed at SNAs

Would you like to help a Scientific and Natural Area? The Minnesota DNR uses volunteers for site management work, including collecting seeds, planting seedlings and controlling exotic species. Volunteers also take photographs, write articles and do other tasks.

MN NPS has “adopted” Grey Cloud Dunes SNA, but members are encouraged to help at any SNA. Most workdays are Saturdays, from 10 a.m. to 2 p.m. The next scheduled workdays are at Lost Valley Prairie SNA Aug. 23 and Sept. 27, and at Hastings Sand Coulee SNA Sept. 27.

For additional information, read the newsletter on the volunteer section of the DNR website, [www.dnr.state.mn.us/snas/index.html](http://www.dnr.state.mn.us/snas/index.html) or call 651-259-5249.

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## Walking in Thoreau’s paths



***More than 60 people “Walked with Thoreau” in Red Wing May 24. They retraced Thoreau’s exploration of Barn Bluff and located many of the plants and flowers he recorded in his journals and letters. The bluff towers over the Mississippi River. This field trip was sponsored by the Anderson Center in Red Wing. Photo by Ken Arndt.***

# Plant Lore

By Thor Kommedahl

## What is bluebead lily?

Bluebead lily, also known as corn lily, is *Clintonia borealis* in the lily family.

## How did it get its names?

Bluebead lily is named for its round, bright, steel-blue berries. Its leaves resemble corn leaves. *Clintonia* is named after DeWitt Clinton (1769-1828) who wrote books on natural history, was responsible for the construction of the Erie Canal, and was governor of New York. *Borealis* comes from a Greek word meaning “of the north.”

## Where does the plant grow?

It is native to Minnesota among other northern states and occurs throughout the state in cool, moist woods and wooded bogs, in open shade.

## What does the plant look like?

It is a perennial spreading by rhizomes, from 6 to 16 inches tall, with two or three basal leaves. The bell-like flowers are pale yellow in umbels, three to eight on a leafless stalk. Flowers appear in May and June, but steel-blue berries are prominent late summer to fall. Parallel veins are conspicuous in leaves

## Has it any medicinal or edible uses?

American Indians applied fresh poulticed leaves to burns, sores, bruises, and rabid-dog bites. Roots contain *diosgenin* (plant steroid used in synthesis of cortisone and other steroid products). Very young leaves have been eaten as a potherb and fresh in a salad. The berries are tasteless. Though reported as mildly poisonous, this has not been confirmed.

## Is it a garden plant?

It has been cultivated in moist, shady, woodsy places and propagated by division of rhizomes or by planting seeds.



**Clintonia borealis flowers, berries. Both photos were taken by Peter Dziuk.**

## Society memberships will be due in January

MN NPS membership renewals are due in January, not in October as in past years. When the Society's board of directors voted in January to change to a calendar year, they extended current memberships by three months.

A membership form for renewals and new members will be included in the next issue of the *Minnesota Plant Press*.

## Events planned on Labor Day weekend at Kilen Woods State Park

Join Nancy Sather, Minnesota County Biological Survey ecologist, for a series of Sesquicentennial natural history events at Kilen Woods State Park on Labor Day weekend. The park is north of Lakefield in Jackson County.

Activities will include forest and prairie hikes, pioneer crafts and evening presentations about landscape history and rare plants of the Des Moines River Valley. Come the day before or stay an extra day and help the DNR with prairie bush clover monitoring in the park.

For additional information, check the DNR Parks website at [www.dnr.state.mn.us/state\\_parks](http://www.dnr.state.mn.us/state_parks) and go to the three-month events calendar. To volunteer with bush clover, send an e-mail to: [nancy.sather@dnr.state.mn.us](mailto:nancy.sather@dnr.state.mn.us)

## Clean water tour shows native plants

Native plant installations that protect water quality are featured in the second annual Shoreview Green Community Awards Tour, from 12:30 to 5 p.m. Aug. 2 and 3.

This free, self-guided tour of residential properties includes shoreline buffers that prevent lakeshore erosion, plus rain and habitat gardens that beautify yards while infiltrating storm runoff.

Properties are in Shoreview and the Grass Lake watershed portion of Roseville. Maps are available at the Shoreview City Hall and Community Center and online at [www.ci.shoreview.mn.us](http://www.ci.shoreview.mn.us). For more information, call 651-483-3935. The tour is sponsored by the Shoreview Environmental Quality Committee, with assistance from the Sierra Club North Star Chapter.



Minnesota Native Plant Society  
P.O. Box 20401  
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**Summer 2008**

