Minnesota Plant Press

The Minnesota Native Plant Society
Newsletter

Volume 20 Number 1 **Fall 2000**

Upcoming Monthly Meetings

Minnesota Valley National Wildlife Refuge
Visitor Center, 3815 East 80th Street
Bloomington, MN 55425-1600
612-335-2323

6 - 6:30 p.m.	— Board meeting, Room B
6:30 - 7 p.m.	— Refreshments, information, Room A
7 - 9 p.m.	— Program, Society Business
9 - 9:30 p.m.	— Socializing
9:30 p.m.	— Doors locked

Programs

Oct. 5
"Impacts of invading European earthworms on understory plant communities in hardwood forests of Minnesota," by Cindy Hale, U of MN/ NRRI, Duluth
Report: "Think Native program"

Nov. 2
"Habitat fragmentation and the native purple coneflower: pollination, fitness and genetic diversity," by Stuart Wagenius, U of MN
Seed exchange

Dec. 7
"Prairie Passages National Wildflower Route: a route to rediscovery of the North American prairie," by Kathy Bolin, DNR/DOT
Plant-of-the-Month: Bog laurel, by Janet Larson

Jan. 4
No meeting.

Feb. 1
Speakers to be announced.

MNPS Web Site
http://www.stolaf.edu/depts/biology/mnps

Can we save upland northern white cedar?

by Mary Hoff, guest writer

Upland northern white cedar was a small but valuable component of the presettlement landscape of Lake Superior's North Shore. But unless we do something to save it, this late successional tree could soon become little more than a memory, says Department of Natural Resources forest ecologist Meredith Cornett.

Meredith spent five years studying cedar regeneration on the North Shore as a graduate student in the University of Minnesota's Department of Forest Resources. Her findings are sobering: "Virtually no regeneration is happening, at least within a half a kilometer of the North Shore," she reports.

The culprit? Meredith's research implicates two major changes brought on by logging: alterations in the character of the forest floor, and introduction of white-tailed deer. In one study, Meredith found that northern white cedar regenerates best on large logs littering the forest floor. "White cedar relies on those logs as a safe site for germination and early establishment," she says. "We have so changed forest composition and age structure, my research suggests that cedar doesn't always have what it needs to get started in life."

In a second study, Meredith showed that even if North Shore northern white cedars are able to find a suitable site to germinate, they're more than likely doomed by white-tailed deer. Cedar is a preferred browse for white-tails, which invaded the area in the early 1900s in the wake of logging.

To assess the impact of deer and cover type, Meredith compared the size and survival rate of planted northern white cedar seedlings in mature cedar stands and under paper birch, both out in the open and inside fences built to exclude deer. When white-tailed deer browsing wasn't a factor, seedlings survived better under the birch. But when browsing pressure was severe — and that was the case at virtually every site outside the fences — the overstory didn't matter. Many seedlings didn't make it at all; those that did got smaller rather than taller over time as deer munched away at their attempts to grow.

What can resource managers do to help ensure a brighter future for northern white cedar along the North Shore? Meredith offers a number of recommendations:

•Consider the needs of white cedar and other late successional species when managing deer numbers along the North Shore. Pressure from

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John W. Moore dies

by Thomas Morley

John Moore, scientist at the University of Minnesota Herbarium, died recently. He was born in a wood-framed sod house at Jud, N.D., in 1901. A prairie fire later burned it down. John lived only a few years at that site. The family moved to Edgely, where his father was a professional photographer. His father died when John was six years old. His mother took over the photography business and operated it for 40 more years.

John did his undergraduate work at Brookings, S.D., in about 1920 - 1924. One of his professors, noting John's great interest in plants, told him he should work in that field. John made a collection of about 3,000 South Dakota plants, now housed in the University of Minnesota herbarium. John did summer work in Utah with Dr. J. Arthur Harris, the department head.

John took his advanced degrees at the University of Minnesota at Minneapolis. The M.S. was granted in 1925. In 1927 he spent nine months in Raiatаea doing field work for his Ph.D. thesis, the degree being granted in 1933. John taught in an Iowa school and then at Stevens Point, Wis.

Hired at the University of Minnesota, John worked in the herbarium for the next 40 years. He did much of the early collecting of plants of the state. Cooperating with the curator of the herbarium, he collected systematically in county after county over most of the state. He published lists of plants collected in Pipestone, Clay, Kittson, Blue Earth and Houston counties, for the Crow Wing Natural History Area and the Cedar Creek Natural History Area. With Dr. R. M. Tryon, Jr., he published a preliminary checklist of flowering plants, ferns and fern allies of Minnesota.

Heritage Forest Legislation Passed

by Meredith Cornett

Legislation creating the Big Woods Heritage Forest was passed this session. Passage came with the support and cooperation of many partners, including the Native Plant Society. The Minnesota Department of Natural Resources worked closely with The Nature Conservancy, county governments and key legislators to create this tool for conserving the hardwood forests of southeast Minnesota.

The new law provides incentives for private, voluntary conservation easements with many public benefits. A team of supporters is currently drafting a plan for implementing the BWHF.

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 and 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.

The Minnesota Native Plant Society

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The Minnesota Native Plant Society is a tax-exempt 501 (c)(3) organization as determined by the U.S. Internal Revenue Service. Contact the society by e-mail at: mnps@altavista.net. Dues for regular members are $12 per year; for students and seniors, $8; for families, $15; for institutions, $20; and for donors, $25. All dues include a newsletter subscription. Four issues are published each year. Make checks out to: Minnesota Native Plant Society; mail them to: Minnesota Native Plant Society, 220 Biological Sciences Center, 1445 Gortner Ave., St. Paul, MN 55108.

MNPS Board of Directors

White cedar

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hunters to maintain high deer populations should be tempered by an awareness of the damaging effect of deer on natural communities in the area.

•Where deer browsing is low, consider focusing on regenerating white cedar under deciduous trees rather than in a mature white cedar stand. "My research definitely showed that planted cedar seedlings had a better chance of surviving and growing well if they were planted under an early successional deciduous canopy," Meredith says.

•Consider leaving some large logs and branches behind after harvest to serve as future seedbeds for cedars. "Those logs on the forest floor have a lot of important functions, including regeneration of late successional species," Meredith says. "In some cases, that should be protected as much as you'd protect advance regeneration if you were trying to get a species to come back into a stand."

•Protect large tracts of older forest. Large, dense tracts create forest interiors where cedar and other browse-sensitive species can be relatively safe from deer. Meredith also recommends that deer exclosures be built in parks and nature centers, not only to protect cedars, but also to educate the public about the problem.

"Building deer exclosures is a very expensive way to go, but at the same time, if we put them into strategic locations they can be used not only for conservation purposes but also for educational purposes. People can see what impact these high concentrations of deer are having on the habitat," she says. "Many of these exclosures are located along trails and have some signs up. It would be nice to step that up a bit."

This article originally appeared in the August 2000 issue of "Roots," newsletter of the Minnesota Department of Natural Resources Division of Forestry.

It's acorn time

by Catherine Reed

It looks like another good acorn crop here in St. Paul, so let's collect acorns before squirrels get them all.

1. Collect acorns which are black or brown, have no holes, and which slip easily from their caps.

2. Soak them in water for 24 hours and discard any that are still floating.

3. Put in a Ziploc bag and refrigerate.

4. They will sprout roots in a few weeks to several months, depending in part on the species. You can pot the acorns as soon as they sprout or keep them refrigerated until spring, then pot or plant outdoors.

5. Acorns and seedlings MUST be protected from squirrels. Use metal, not plastic.

Sprouting and planting acorns is a great project for both adults and kids. Don't delay in collecting them.

Iowa State symposium to be on invasive species

Invasive plants and animals now in Iowa, their effects and control will be discussed Oct. 6 - 7 at Iowa State University. For information, contact Jim Dinsmore, 515-294-7669; e-mail oldcoot@iastate.edu. The URL is http://www.ag.iastate.edu/departments/aecl/invasives

Yew revisited

by Thor Kommedahl

Yew may not be thought of as a conifer because the female plants do not produce cones such as seen in pines, spruces, and firs, even though yew is classified in the *Coniferales.*

Moreover, the seed is borne in an aril, a fleshy structure that may be a modification of a cone scale.The aril resembles a fruit, which it is not, of course, since the yew is a gymnosperm, and fruits and flowers are characteristic of angiosperms (flowering plants), not gymnosperms.

Plant Lore

by Thor Kommedahl

What is jewelweed?

Jewelweed is an *Impatiens* species. It is also known as "Touch-me-not."

What do these names mean?

Obviously, *Impatiens* means impatience probably referring to its sensitivity and suddenness with which its seeds are expelled when the capsules are touched. When dew forms on leaves, the drops bead up on the surface, glistening like jewels. The flowers hang like jeweled earings and that may account for the name.

Where is jewelweed found?

Impatiens capensis grows throughout most of the state in moist woods, ditches, springy places. It flowers from June to September.

How is this related to our garden impatiens?

Usually the garden plants are hybrids of tropical species. They like shade, and these plants have been known also as "patient lucys" or "busy lizzies".

What are some of its features?

The two rounded pale leaves of seedlings are noticeable in spring. It is an annual, with fairly shallow roots indicating a dependence on surface moisture. The sap in stems is orange. The flowers are orange with reddish spots.

Tell me more about the flowers.

There are two stages: a male, then a female stage of the same flower. Insects visit some flowers in the male stage then visit the female stage and thereby effect pollination.

Has jewelweed any medicinal uses?

Crushed leaves have been applied as a poultice for poison ivy and nettle rashes. American Indians made a tea from leaves and used it as a wash to treat fevers.

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