



# Minnesota Plant Press

The Minnesota Native Plant Society Newsletter

[www.mnnps.org](http://www.mnnps.org)

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Volume 35 Number 1

Spring 2016

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## Minnesota Native Plant Society

*A non-profit organization dedicated to the conservation and appreciation of Minnesota's native plants and plant communities through education and public awareness.*

### Monthly meetings

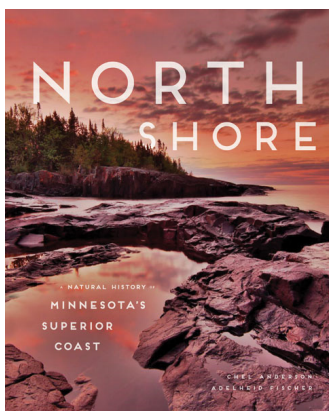
Thompson Park Center/Dakota Lodge  
Thompson County Park  
1200 Stassen Lane  
West St. Paul, MN 55118

First Thursday of the month, October-December & February-June. Social period begins at 6:30 p.m. and the meeting runs from 7-9 p.m. Check at [www.mnnps.org](http://www.mnnps.org) for more program information.

### Monthly Programs – Spring 2016 Upcoming

**May 5:** Anna Gerenday, Mycologist, University of Minnesota. Talk: **Looking for Mushrooms. Building the Minnesota Mycota.** Plant of the Month: Speckled alder (*Alnus incana*).

**June 2:** Chel Anderson, Ecologist, MN DNR. Author of recently released North Shore, Minnesota's Superior. Talk: **Nature and Culture: the MN North Shore's ancient, still unfolding stories.** Plant of the Month: Northern paintbrush (*Castilleja septentrionalis*).



### Book Signing

The Society has purchased a number of Chel's book, North Shore, Minnesota's Superior for the June meeting. Those who purchase the book will have the opportunity to have their book signed by the author.

### Wild Rice in Minnesota: Recent Research on Habitat Requirements

This is a summary of the presentation made at the February meeting by *Edward Swain*, Research Scientist, Minnesota Pollution Control Agency (MPCA)

Minnesota's wild rice is *Zizania palustris*, one of four species in the genus. *Zizania* is in the same group of grasses as *Oryza*, which is the genus containing cultivated white rice. *Zizania palustris* has often been confused with *Z. aquatica*, which hasn't been recorded in Minnesota since herbarium specimens were collected in 1899 in the lower Mississippi River. *Z. aquatica* is found from Wisconsin to the Atlantic coast, and is found in freshwater tidal wetlands from New England south to Florida and the Gulf coast. The other two species of *Zizania* are interesting: *Z. texana*, an endangered species with about 200 individuals, only exists in the headwaters of the San Marcos River of Texas. *Z. latifolia* is native to Asia, and for at least the last 1,000 years has been cultivated for the consumption of its stems that are infected with a smut fungus. Unlike *Z. palustris* and *Z. aquatica*, which are annuals that make many seeds, *Z. texana* and *Z. latifolia* are perennials that rarely go to seed. Wild rice seeds fall into the water when mature and sink into the mud. Seeds lose viability if the soil dries out. All wild rice species grow in the water-saturated soil of wetlands, which results in a dramatically different habitat than is experienced by terrestrial plants. One big difference is that oxygen is not very soluble in water, and is essentially zero in the water-saturated soil. Even though the photosynthetic parts of plants make oxygen during the day,

Continued on Page 3

## Society Leadership

Board members' names are followed with the year their term expires in parentheses.

**President:** Mike Lynch

**Vice President:** Shirley Mah Kooyman

**Secretary:** Scott Milburn

**Treasurer & Membership:** Ron & Cathy Huber

**Board Member:** Ken Arndt (2019)

**Board Member:** John Arthur (2018)

**Board Member:** Tom Casey (2017)

**Board Member:** Steve Eggers (2018)

**Board Member:** Otto Gockman (2017)

**Board Member:** Mike Lynch (2017)

**Board Member:** Scott Milburn (2018)

**Board Member:** Welby Smith (2019)

**Board Member:** Jyneen Thatcher (2016)

**Conservation Chair:** Tom Casey

**Field Trip Chair:** Ken Arndt

**Program Chair:** Jyneen Thatcher

**Publications Chair:** Open

**Symposium Chair:** Otto Gockman

**Website:** Katy Chayka

## MNNPS Board of Directors News

Tom Casey has joined the board to fill the board vacancy through 2017. Additionally, board member elections took place in March at the monthly meeting. Ken Arndt and Welby Smith were re-elected while Simba Blood was elected to take the third open board position. Simba's term will begin in June at the next quarterly board meeting.

## MNNPS Membership Positions

You do not need to be a member of the board to contribute your time and skills. We always need field trip ideas and leaders as well as hospitality and logistics at monthly meetings. Ideas for monthly speakers are always welcome. At this time we are seeking a newsletter editor. We are preferably looking for someone who can write content in line with our mission as well as seek out writings from our membership. As you are aware, the newsletter is an integral part of the Society, serving to not only inform our membership about the goings-on of the Society, but also to educate the membership.

## Society News:

### Proposed change to the Articles of Incorporation

The Society's Board of Directors is often in a position that it must conduct business outside of normally scheduled quarterly board meetings. Minnesota Statute 317A.239 requires unanimous consent by all board members in order for a motion to pass when voted on outside of physical meeting. (This is termed an "action without a meeting.") However, this same statute allows the Society to amend our Articles of Incorporation to allow for a simple majority vote when an action is requested without meeting. This will allow the Society to conduct business more efficiently on matters that require immediate action, such as letters of support on conservation items, for example. Therefore, the following resolution will be brought forth to the membership for a vote at the monthly meeting in May 5, 2016

### Resolution – Amend Articles of Incorporation

Whereas, the Members of the Minnesota Native Plant Society, Inc. desire to allow the Board of Directors more flexibility in making decisions between meetings of the Board of Directors;

Whereas, Minnesota Statute 317A.239 requires a unanimous vote of the Board of Directors for "actions without a meeting", unless the Articles of Incorporation allow less than a unanimous vote;

Now, therefore, **BE IT RESOLVED** that the Members of the Minnesota Native Plant Society, Inc.

1. Approve an amendment to the Articles of Incorporation to state: "Any action permitted to be taken at a meeting of the Board of Directors may be taken by written action, signed or consented to by electronic communication, by a simple majority of all Directors."
2. Authorizes the President to file this amendment with the Minnesota Secretary of State in the manner required by law.

## Membership Categories:

- Individual or family \$15
- Student or senior \$8
- Institution \$20
- Lifetime \$300

## **Wild Rice** cont. from **Page 1**

all plant parts need to respire oxygen 24 hours a day, including the roots extending down into the anoxic mud. Aquatic plants have special hollow passageways, called aerenchyma, that transport air down to the roots.

Not only is oxygen essentially zero in the mud, but the lack of oxygen produces a cascade of microbial and chemical changes that require specialized adaptations on the part of wetland plants. Iron, which in oxygenated terrestrial soils can be so unavailable as to limit plant growth, goes into solution in anoxic saturated soils at concentrations that would be toxic to most terrestrial plants. The dissolution of iron releases phosphate bound to the iron so that wetland plants, including wild rice, are rarely limited by iron or phosphorus. Nitrogen is usually the limiting nutrient.

Wetland soils can contain appreciable amounts of decaying plants, which presents an opportunity for bacteria that degrade organic matter, such as the roots and straw produced annually by wild rice. Without oxygen, bacteria “breathe” or respire other chemicals, including iron and sulfate. Bacterial respiration of iron simply puts iron into solution, but respiration of sulfate produces hydrogen sulfide, which accounts for the odors often released when one walks through a wetland.

Hydrogen sulfide is very reactive with metals, which accounts for its potential toxicity to animals and plants that live in wetland soil, since all organisms have iron-containing essential enzymes that are denatured by elevated hydrogen sulfide. However, wetland organisms, including wild rice, may be protected from the toxic effects of hydrogen sulfide if the wetland soil contains enough iron to remove hydrogen sulfide from solution. Some wetland plants may also release oxygen from the aerenchyma in their roots to detoxify hydrogen sulfide by converting it back into sulfate.

All plants have basic habitat requirements that include water, light, and physical space. Perennial plants, such as lily pads, can dominate the physical space and light availability in a wetland, making it impossible for wild rice to grow. Some aquatic systems have too little transparency for any rooted plants to grow up from the bottom, a situation that can be caused by nutrient pollution that allows a high density of suspended algae.

Recent research sponsored by the MPCA found that wild rice can grow in a wide variety of aquatic habitats, so long as there is space, clear water, and sufficiently low concentrations of hydrogen sulfide. Some perennial plants, such as lily pads, seem to be more tolerant of hydrogen sulfide. Even though hydrogen sulfide is produced from sulfate in the overlying water, field studies do not find a strong correlation between the two chemicals. The net amount of hydrogen sulfide not only depends on the concentration of sulfate in the water, but also on the soil’s concentrations of organic matter and iron.

The habitat requirements of wild rice are, then: physical space, clear water, and a saturated soil that has relatively low concentrations of hydrogen sulfide. Hydrogen sulfide is necessarily low if sulfate is very low, but also can be low when sulfate is high if the ratio of iron to organic matter in the soil is sufficiently high.

### **A Note about Membership Costs**

The Plant Society is a non-profit organization and as such we try to keep our membership rates low to be inclusive of everyone regardless of their ability to pay. We are all volunteers and work hard to keep our costs as low as possible and yet provide our membership with quality programs, news, etc.

Right now the cost of simply printing and mailing four hard copy newsletters and eight meeting reminder postcards is about \$15.67 per year per membership. To send the same information electronically is roughly \$0.93 per year per membership. You can see that the costs for hardcopy exceed not just our \$8 student/senior rates but also our standard \$15 membership. This is currently acceptable to us as we do not want to exclude anyone based upon their lack of a computer or funds. These costs are covered by donations, the rates paid by members who receive communications electronically, and other fund-raising activities.

It does, however, limit our ability to do some of the other things that we desire (contributing toward publication of books, purchasing microscopes for the University Herbarium, etc.). We do NOT intend to raise our rates in the near future but we hope that those who are willing and able to pay the regular rates will do so and that everyone that is able to receive newsletters and reminders by e-mail will do so. Many thanks to ALL of our members for their support.

## Lichen Profile: Gold-eye lichen

Otto Gockman

Gold-eye lichen (*Teloschistes chrysophthalmus*) is a fruticose (shrub-like) species of well-lit sites. The species is typical of the Great Plains and Mexico where it grows on the branches of small trees and shrubs in indirect to direct sunlight. Elsewhere the species occurs in scattered locations in both eastern and western North America. In western North America, the collection record for gold-eye lichen indicates that the species is abundant to common in the Baja Peninsula but decreases in abundance as you move north into California. It is sporadic across its eastern range, although many of these records are historical. According to James and Patricia Hinds in their book Macrolichens of New England, the species is thought to be extirpated from New England. In reference to this species and other closely related taxa, Irwin Brodo writes, in his book Lichens of North America, “the species [has] been eliminated over parts of [its] former range, especially in the northeast, because of habitat destruction and air pollution”. Records from the Consortium of North American Lichen Herbaria suggest that only a handful of collections of the species has been made from the northeastern United States since 1950! Gold-eye lichen is listed as a species of special concern in Wisconsin, where only three collections have been made since 1950.

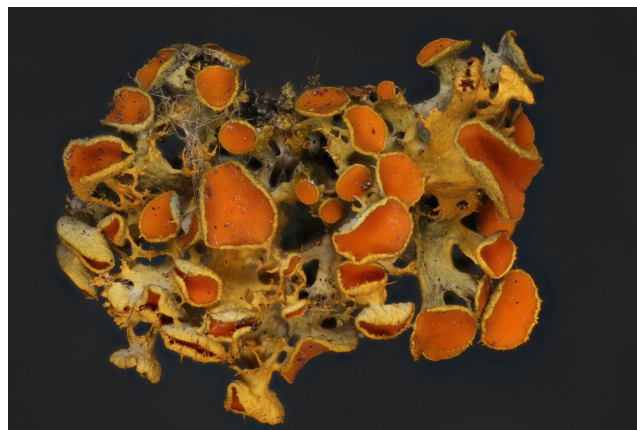
In Minnesota, gold-eye lichen appears to be fairly secure, though its distribution follows the overall distribution trend seen elsewhere in North America, with the majority of records being from the Prairie Province in the western tier of counties and a few scattered sites in the northern and eastern parts of the state (see map). In 2015, John Thayer discovered a population of gold-eye lichen in Cottage Grove. This recent discovery is significant because of the species’ apparent sensitivity to air pollution. John’s collection was made from the trunks of staghorn sumac (*Rhus typhina*) in a public park, a substrate which is common in the greater Twin Cities metro area. I encourage readers to keep an eye out for this species as they explore natural areas throughout the state, but be especially watchful around the Twin Cities. The species is easy to recognize and identify in our region since it is the only fruticose lichen species with an orange thalus (lichen body) that we have, though this coloration may

be limited to the area immediately around the apothecia (the cup-shaped “fruiting” structure).

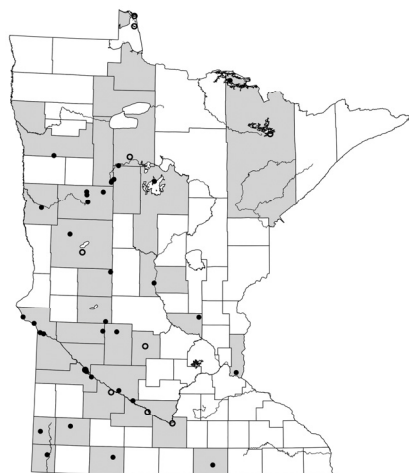
If you want to see this species in the wild, I recommend searching the spruce (*Picea* spp.) and balsam firs (*Abies balsamea*) along the shore of Lake Itasca in Itasca State Park; the species seems to be particularly abundant in this area!



*Teloschistes chrysophthalmus*



*Teloschistes chrysophthalmus*, photos courtesy of Otto Gockman and Minnesota Wildflowers



Distribution Map of *Teloschistes chrysophthalmus*, courtesy of John Thayer



## What, exactly, is a bulrush?

Welby Smith

First, a bulrush is not a rush at all - it's a sedge, which means it's in the family Cyperaceae. Rushes are in the family Juncaceae. The two families are closely related, but they're not the same thing. Hence my preference for the name "bulsedge", which I hope will catch on. People who learned their plants in the 1980's or 90's, like I did, learned that bulrushes are in the genus *Scirpus*. We learned that Minnesota had 27 species of *Scirpus*, and we worked hard to learn them all.

Since then, science has stirred the pot by reassigning our bulrushes to 5 separate genera, and given them names that most people have never heard of. The little ankle-high clumped bulrushes are now in the genus *Trichophorum*; the big river bulrush is in the genus *Bolboschoenus*; the leafless round-stemmed bulrushes are in the genus *Schoenoplectus*; the dwarf annual bulrushes are in the genus *Schoenoplectiella*; the leafy perennial bulrushes were left in the genus *Scirpus*. Trust me, this all makes sense.

I feel an affinity for all the bulrushes, wherever science has put them, but my favorites are probably the round-stemmed bulrushes now called *Schoenoplectus* (see me in person and I'll tell you how to pronounce it). There are three in particular that I would like to tell you about. Many people already know two of them, or think they do; the conveniently named soft-stemmed bulrush (*Schoenoplectus tabernaemontani*) and hard-stemmed bulrush (*Schoenoplectus acutus*). The third one is called slender bulrush (*Schoenoplectus heterochaetus*). It's one that everyone should know, but practically no one does.

Before I proceed, I will address the unasked question: What's the big deal about bulrushes? If you follow natural resource issues you will probably know that bulrushes are rapidly disappearing from lakeshore habitats, and no one is quite sure why. This is a concern to wildlife and fisheries biologists because bulrushes are key habitat components for fish and waterfowl.

Preservation and restoration efforts invariably focus on soft-stemmed and hard-stemmed bulrush with no attention paid to the lesser known, and less common, slender bulrush. For the sake of my science, I would like to change that.

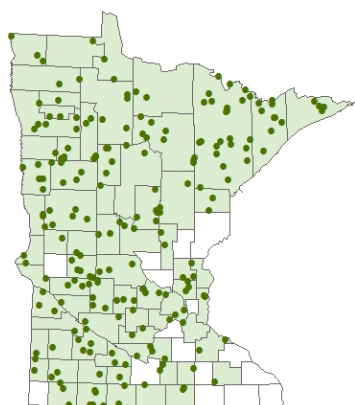
The following key is adapted from a much larger project I am working on and is rather technical. The only essential thing to know is that spikelets are the individual clusters of flowers. The photos might help.

1. All spikelets solitary at the ends of distinct branches; achenes 2.5-3 mm long, trigonous (3-sided in cross-section) \_\_\_\_\_ Slender bulrush (*S. heterochaetus*)

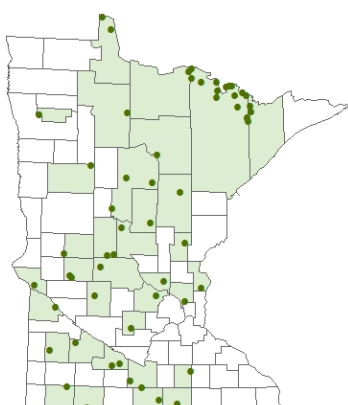
1. At least some spikelets in clusters of 2-8 at the ends of branches; achenes 1.8-2.5 mm long, plano-convex (2-sided in cross-section).

2. Inflorescence 5-15 cm long, with 30-200 spikelets, many (30% +) of the spikelets solitary, the rest in clusters of 2-3; stems soft, easily compressed \_\_\_\_\_ Soft-stemmed bulrush (*S. tabernaemontani*)

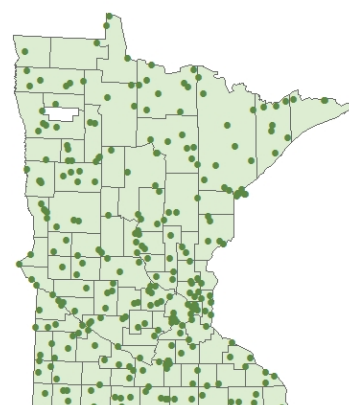
2. Inflorescence 2-8 cm long, with 10-40 spikelets, few if any (5-10%) of the spikelets solitary, most in clusters of 2-8; stems firm \_\_\_\_\_ Hard-stemmed bulrush (*S. acutus*)



*S. acutus*



*S. heterochaetus*



*S. tabernaemontani*

## The National Wetland Plant List – What is it and What is it Used For?

Steve Eggers

Anyone not involved in the wetland regulatory arena may be unaware of an on-line resource containing a wealth of information on vascular plants that occur in wetlands of the United States. The *National Wetland Plant List* had its origin in the 1980s, a period that saw an explosion of interest in identifying and delineating wetlands for state and federal regulatory programs. A definition and method for identifying “wetland vegetation” was needed – one that would stand up to the rigors of the regulatory arena.

As part of the National Wetland Inventory undertaken by the U.S. Fish and Wildlife Service (Service), a wetland plant list was developed by the Service in cooperation with Federal interagency review panels. The list was published in 1988 (1988 List) and became an essential tool for delineating wetlands. Responsibility for the list was transferred to the U.S. Army Corps of Engineers in 2006. An extensive effort to update the 1988 List ensued and involved regional panels of botanists/plant ecologists, oversight by a national panel of experts, and a national public notice and comment period. The update was published in 2012 as the *National Wetland Plant List* (NWPL). The NWPL employs 10 regions (Figure 1 shows the seven regions in the Lower 48) to account for different ecological/climatological/geological factors across the United States. Minnesota lies within three of the regions: Great Plains, Midwest, and Northcentral/Northeast. Minor updates to the NWPL followed in 2013 and 2014 and currently a 2015 update is in process.



While cattails (*Typha* spp.), bulrushes (*Schoenoplectus* spp., *Scirpus* spp.) and water-lilies (e.g., *Nymphaea* spp., *Nuphar* spp.) are obvious wetland plants, what about plant species that occur in areas transitional between wetlands and uplands, or species that occur with equal frequency in both wetlands and uplands (e.g., red maple (*Acer rubrum*))? The NWPL assigns one of five indicator statuses to a plant species depending upon its frequency of occurrence in wetlands (**Table 1**).

Cattails, bulrushes (bulsedges) and water-lilies mentioned in the previous paragraph are examples of **OBL** species. Examples of **FACW** species include blue vervain (*Verbena hastata*), reed canary grass (*Phalaris arundinacea*) and swamp white oak (*Quercus bicolor*). In addition to red maple, other examples of **FAC** species – which occur with more or less equal frequency in both wetlands and non-wetlands – include plains cottonwood (*Populus deltoides* ssp. *monilifera*) and curly dock (*Rumex crispus*). Canada thistle (*Cirsium arvense*), black cherry (*Prunus serotina*) and Indian

Table 1.	
Indicator Status	Description
Obligate (OBL)	Almost always occur in wetlands
Facultative Wetland (FACW)	Usually occur in wetlands but may occur in non-wetlands
Facultative (FAC)	Occur in wetlands and non-wetlands
Facultative Upland (FACU)	Usually occur in non-wetlands but may occur in wetlands
Upland (UPL)	Almost never occur in wetlands

grass (*Sorghastrum nutans*) are examples of **FACU** species. An example of an **UPL** species in the Northcentral/Northeast Region is common milkweed (*Asclepias syriaca*). The same plant species can have a different indicator status in a different region. Common milkweed is rated as FACU in the Midwest Region, for example. Plant species rated as UPL across all 10 regions are not included on the NWPL.

How is the indicator status applied for purposes of wetland delineations? Plant species rated OBL, FACW or FAC are considered wetland plants, or **hydrophytes** (hydro=water; phyte=plant). Plant communities dominated by hydrophytes – **hydrophytic plant communities** – meet the vegetation criterion for wetlands.

Currently, over 8,000 species are on the NWPL. Subsets of the NWPL by state or region can be downloaded as pdf. or xls. files. The web page for each species includes distribution maps, biological attributes, photographs, ink drawings, external web links, and synonyms (more than one scientific name for the same plant species).

The high volume of changes in nomenclature has caused frustration among wetland practitioners and others. Red-osier dogwood, for example, has had three scientific names applied in recent years: *Cornus stolonifera* Michx., *C. sericea* L. and the currently accepted *C. alba* L. The NWPL makes it easy to determine the currently accepted scientific name for a species. Using the search function, type in the scientific name for a plant species and regardless of whether the name you use is a synonym or the currently accepted scientific name, the NWPL will direct you to the web page for that species. I have received more than a few inquiries from wetland practitioners as to why the NWPL omitted a plant species known to occur in wetlands. Several involved *Rhamnus frangula* (glossy buckthorn). Type in *Rhamnus frangula* in the search function and the NWPL will direct you to the web page for *Frangula alnus*, the currently accepted name for glossy buckthorn.

The web page includes technical papers and even a video series on “All Things Wetland Plants.” Google “national wetland plant list” or type in: [wetland\\_plants.usace.army.mil](http://wetland_plants.usace.army.mil)

## Scientific and Natural Areas Profile – Gully SNA

Scott Milburn

Anyone familiar with the Natural History magazine, knows of a column called This Land. The column first appeared in 1984 and was written by famed Midwestern botanist and MNNPS lifetime member Dr. Robert Mohlenbrock. This piece explored natural areas throughout the entire United States, giving the reader a glimpse of these special and unique places.

I was always inspired by these articles and thought this might be something we could do with a focus on our Scientific and Natural Areas (SNAs) for the Plant Press. I now have my chance and I hope to provide quarterly pieces exploring our SNAs. The initial goal will be to provide an ecological glimpse into each site that is covered. A secondary goal is to promote the program itself. This is a program that suffers at the hands of politicians who have differing agendas. The reality is that this program is not about us, but rather for future generations. It is there for us to appreciate and to protect.

The first SNA chosen happens to be one that I am very familiar with, Gully Fen SNA. This is one of the largest SNAs outside of the Peatland SNAs at greater than 1,600 acres. The site is located in eastern Polk County within the Tallgrass Aspen Parklands ecological province.



Officially designated in 1996, this SNA includes a complex mosaic of wet meadow, fire dependent forest, wet forest, forested peatland, and open peatland ecological systems. Of ecological importance are two particular native plant communities, the Tamarack Seepage Swamp, and the Prairie Extremely Rich Fen. The latter community is otherwise referred to as a calcareous fen. The Tamarack Seepage Swamp (FPw63b) community is for the most part unique to just this part of the state. The Gully region is where one can see a convergence of east and west, resulting in some rather intriguing plant associations. This particular community has a varying canopy in terms of cover with tamarack (*Larix laricina*) and occasional black spruce (*Picea mariana*) individuals. What is highly unusual is that sterile sedge (*Carex sterilis*) and Mistassini Primrose (*Primula mistassinica*), both strong calciphiles with great affinity for calcareous fens, are both present amongst other herbaceous species in this community type. Other prevalent calciphiles include shrubby cinquefoil (*Dasiphora fruticosa*) and sage-leaved willow (*Salix candida*). The other community subtype, Tamarack – Black Spruce Swamp (FPw63a), is also present at the Gully SNA. What is exciting about this community subtype is that there are a number of orchid species present including our state flower, showy lady's slipper (*Cypripedium reginae*) as well as two rare orchid species, ram's-head orchid (*Cypripedium arietinum*) and white adder's mouth (*Malaxis monophyllos*). Both species were recent observations and they both extend their known distribution in Minnesota.

The calcareous fens here are fairly small pockets within the entire SNA complex. These fens are typically saturated during the entire growing season, fed by calcium rich groundwater. The vegetation tends to be short-statured which includes sterile sedge along with hair-like beak rush (*Rhynchospora capillacea*), Sticky false asphodel (*Triantha glutinosa*), American grass-of-Parnassus (*Parnassia glauca*), beaked spike-rush (*Eleocharis rostellata*), and Twig-rush (*Cladium mariscoides*). One of the more intriguing botanical oddities is the presence of pitcher plants (*Sarracenia purpurea*). This species is most often associated with nutrient poor systems including open bogs and poor fens, but it is an important component of the fens of the Gully region, contributing to the uniqueness of this area.

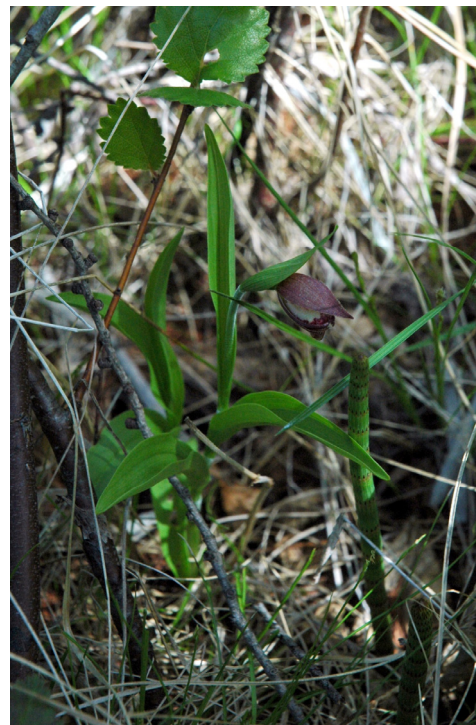


Image of *Cypripedium arietinum* from Gully SNA, 2010.

Despite the SNA status, this SNA is vulnerable to a number of direct and indirect factors. Hydrology is the key to sustaining the ecological integrity of the various wetland communities present and therefore this requires oversight. The SNA includes several substantial drainage ditches that have been present since before the SNA designation, but the ditches continue to function as intended. In addition to direct hydrologic impacts are those indirect impacts related to dewatering activities with nearby gravel mining and agriculture. Water appropriations are a hot topic which pits local economics against conservation. The area is worthy of the upmost protection and this area is a must-see natural area attraction.

## Plant Lore

Thor Kommedahl

### What is Virginia cowslip?

It is *Mertensia virginica*, a native perennial in the borage family.

### How did it get its names?

*Mertensia* was named after a German botanist F.C. Mertens and *virginica* refers to Virginia at a time in history when Virginia extended west to the Mississippi. “Cowslip” comes from an old- English word cuslyppe meaning cow dung probably because plants flourished in cow pastures.



*Mertensia virginica*, Images courtesy of Minnesota Wildflowers



**What does the plant look like?**

Bell-shaped flowers in small cymes are pink in bud and turn blue when opening. Strongly-veined leaves are smooth and elliptic to egg-shaped. Plants grow 1-2 feet tall. Four seeds reside in wrinkled nutlets.

**Where does it grow?**

It grows in moist woods and wet meadows in southeastern counties of Minnesota. Butterflies pollinate flowers.

**Is it edible or medicinal?**

Not edible. It is a laxative and sedative and has been used internally for arthritis, headache, respiratory tract infections, and topically for sunburn. Flowers and roots contain flavonoids, glycosides, and saponins.

**Has it any economic value?**

No, except it is planted in gardens for early spring flowers. It blooms from

**MNNPS Field Trips for 2016**

*Ken Arndt*

2016 is going to be another great year for going on a MNNPS field trip. Attending one of the society's field trips is a great way to see some of Minnesota's many unique native plant communities as well as meeting others who share a similar interest in native plants. Currently we have twelve field trips that are planned for 2016 and are now open for registration. You can register for any of the field trips by visiting our website [www.mnnps.org](http://www.mnnps.org) and going to the field trip page or by attending one of our monthly meetings where sign-up sheets will be available. Information for all of the field trips will be posted to the website regularly. Most trips have a limited number of registrants due to site sensitive areas that are encountered so registering early is encouraged.

The following is a list of MNNPS field trips planned so far for this year.

**May 14<sup>th</sup>** Minnesota Landscape Arboretum "Spring Wildflowers" with Shirley Mah Kooyman

**May 21<sup>st</sup>** Lost Valley Prairie SNA "Interpretive Hike and Volunteer Restoration Event" with Steve Poole and Jim Smetana

**June 4<sup>th</sup>** Grey Cloud Dunes SNA "Interpretive Hike with the Sierra Club" with Kelly Randall and Larry McCabe

**June 5<sup>th</sup>** Savage Fen SNA and Seminary Fen SNA "Fens, Sedges and Orchids" with Steve Eggers and Scott Milburn

**June 5<sup>th</sup> & 6<sup>th</sup>** Norris Camp and Red Lake WMA "Exploring the Peatlands of Northern Minnesota" with Malcom & Rosemary MacFarlane and John Arthur with other speakers/leaders TBA

**June 12<sup>th</sup>** Carpenter Nature Center "Early Summer Ravine and Cliff Plant Communities" with Jyneen Thatcher

**June 18<sup>th</sup>** Springbrook Nature Center "Dragonflies 101" with John Arthur

**June 26<sup>th</sup>** Quarry Park SNA "Bedrock Outcrops, Wet Meadow/Prairie and Oak Woodland/Forest Plant Communities" with Jyneen Thatcher and DNR representative TBA

**July 9<sup>th</sup>** Falls Creek SNA "Ferns in the Forest" with Barb Delaney

**July 23<sup>rd</sup>** Black Lake Bog SNA "A Focus on Updating and Expanding the Plant Species List for the SNA" with AmberBeth VanNingen

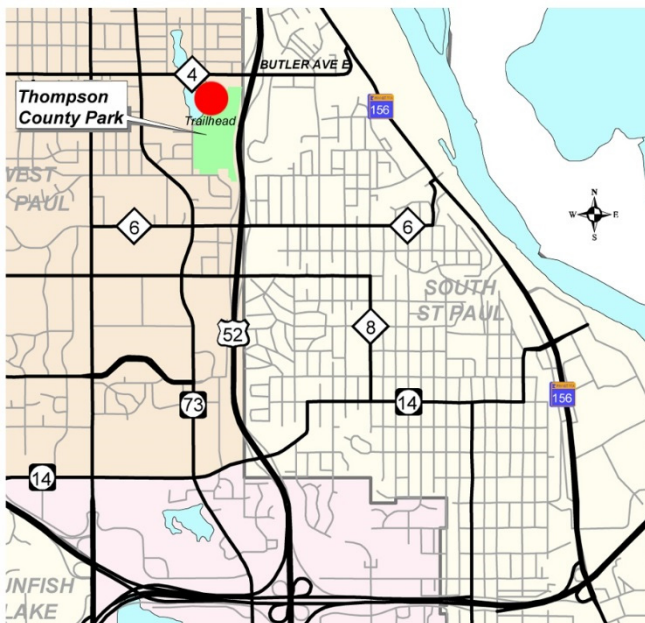
**August 20<sup>th</sup>** Larix Wildlife Management Area "Calcareous fens, Tamarack Seepage Swamps, and Rich Fens" with Steve Eggers and Scott Milburn

**August 26<sup>th</sup>-28<sup>th</sup>** Shalom Hill Farm "Prairie Perspectives 2<sup>nd</sup> Annual Retreat" with Marilyn Garber, Nancy Sather and Malcolm & Rosemary MacFarlane

**Minnesota Native Plant Society**  
**P.O. Box 20401**  
**Bloomington, MN 55420**

**SPRING 2016**

**Dakota Lodge, Thompson County Park**  
1200 Stassen Lane, West St. Paul, MN 55113



**Directions:**

Take Highway 52 to the Butler Ave. E. exit in West St. Paul.

Go west on Butler 0.2 mile to Stassen Lane.

Go south on Stassen Lane to the parking lot at the end of the road in Thompson County Park