



Twin Cities Chapter Quarterly Newsletter

November 2017 Volume 15, Issue 4

Upcoming Events/Monthly Meetings

SAVE THE DATE!!

Saturday, February 17, 2018

DESIGN WITH NATURE CONFERENCE



We Are Wildlife

Edible and Medicinal Native Plants in Restoration Practice

Featured Speakers:

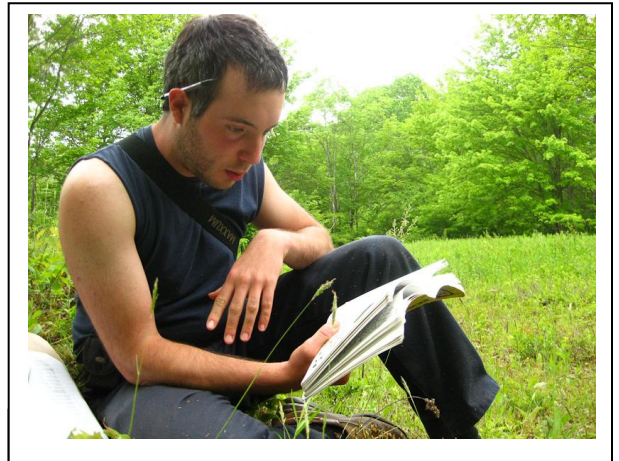
Jared Rosenbaum & Rachel Machow, Wild Ridge Plants, growers and stewards of native plants.

Catherine Zimmerman, The Meadow Project and Director of Urban and Suburban Meadows

Native Plant/Natural Landscape Exhibitors—Experts to help match your ideas with the land!

Where: Anderson Student Center, University of St. Thomas, St. Paul Campus. *More details will be found in our February Newsletter or at designwithnatureconference.org*

Conference Keynote Speaker: **Jared Rosenbaum** explores the greater role native plants may play in home landscapes, farms and food gardens. How might we change our foodways, growing and eating habits, to favor the diversity of edible and medicinal native plants needed for natural land restoration and stewardship? What are the native plant design and management considerations between different habitats such as mesic forest, ridge lines and riparian corridors?



Jared is a field botanist, co-owner of native plant nursery Wild Ridge Plants, and ecological restoration practitioner, dedicated to finding ways we can create sustainable habitat that supports humans, other animals, and native plants alike. He is a founding partner at Wild Ridge Plants LLC, a business that grows local ecotype native plants using sustainable practices, performs botanical surveys, and provides ecological restoration planning services. Jared has extensive experience in stewardship and monitoring of natural communities. He is known as an educator in plant ecology, ecological restoration, and the cultural uses of wild plant foods and medicines. Jared is the author of two books on native plants, including the children's book *The Puddle Garden*, and maintains an active blog at wildplantculture.com.

Communicating Our Mission - Natural Landscape as the New Norm, Catherine Zimmerman.

Inspired by Dr. Tallamy's *Bringing Nature Home*, Catherine Zimmerman produced *Home Town Habitat*, a collection of stories told by people looking to reduce lawn in exchange for the beauty and abundance of meadows. These stories are the touchstone for going further in spreading the idea of selecting for native plants. How might we spread the news of native plants and natural projects in our communities *and nationwide*? What does it take to make a difference locally and nationally? Catherine explores approaches to connect with schools, organizations and agencies to create healthy habitats for humans and wildlife.

Catherine is a certified horticulturist and landscape designer and instructor, award-winning director of photography and documentary filmmaker with emphasis on education and environmental issues. She is an honorary Wild Ones National Director.

Elixirs, Nutrition and Spices from the Native Garden, Rachel Mackow. Native plants can be restored into our gardens and natural areas. Can they be restored deeply into our culture by using them for food and medicine? Join native plant grower Rachel Mackow as she offers portraits of her favorite sustaining species - delicious, nutritive, and healing wildflowers, fruits, and roots. Rachel will talk about their suitability for native gardens and landscapes of all sizes, and touch on how these natives support our extended family of wildlife.

Rachel is a founder and co-owner/operator of Wild Ridge Plants, a native plant nursery and stewardship consulting service. On the farm, Rachel manages Wild Ridge's chemical-free container nursery and field plantings. Rachel is dedicated the restoration of native plant communities that sustain both people and wildlife. She enjoys wild plant cookery, making herbal preparations, and traditional plant craft as a way of life and as a meditation.



She offers her time and knowledge to several community-based projects. Rachel serves on the Technical Advisory Committee for the New Jersey Invasive Species Strike Team. She also participates in a project that seeks to heal local watersheds; the program's guiding vision is "Restoring Paradise: One Watershed at a Time". Rachel is also a writer. Her current writing can be read on her humorous and thoughtful blog, *The Shagbark Speaks*. She lives on a windy ridge in New Jersey with her husband, son, and many, many wild plants.

MONTHLY MEETINGS (*Meetings are held the third Tuesday of the month at Wood Lake Nature Center: social at 6:30, meeting to start promptly at 7:00.*) Free and open to the public

Tuesday, November 21, 2017

Annual Member Meeting, Potluck & Seed Exchange!

WILD ONES IN THE FIELD—A partnership roundtable with WOTC Members

Join us as members share the special knowledge and perspective they bring as Wild Ones working in the wider community with some of the local programs and organizations that align with our core mission: Educating the public about the benefits of preserving and restoring biodiversity of our native plant communities, beginning in our own yards & gardens.

In addition to the roundtable there will be an election of officers. *Also bring a dish & labeled native plant seeds to share!*

Tuesday, January 16, 2018

NATIVE TREE & SHRUB CLINIC: Selection, Planting & Maintenance. Included are:

1. **Native Tree and Shrub Selection for a Changing Climate.** Erik Olsen, Outback Nursery
2. **Managing Healthy Public Space Native Trees and Shrubs.** Paul Buck, City of Plymouth Forester.
3. **From the Ground Up - Tips on Pruning and Timing.** Jason Pruett, Treehugger Treecare

Tuesday, March 20, 2018

ELOISE BUTLER WILDFLOWER GARDEN FLORILEGIUM

Marilyn Garber, The Minnesota School of Botanical Art

Come learn about this unique and growing visual historical record of flora found in the Eloise Butler Wildflower Garden and Bird Sanctuary—established in 1907, it is the oldest public wildflower garden in the United States. The Minnesota School of Botanical Art is the co-sponsor of the Florilegium, which began in 2010.

Tuesday, April 17, 2018

7th ANNUAL TABLE TOPICS - NATIVE PLANT GARDENING 101

- Why Native Plants?
- Site Evaluation and Garden Goals
- Soil and Site Preparation
- Plant Selection and Garden Design
- Native Planting and Seeding
- Garden Care and Maintenance

Help us kick-off our 13th Annual Plant Sale!

Tuesday, May 15, 2018

NATIVE SEDGES AND GRASSES

Dustin Demmer, Blazing Star Gardens in Owatonna, MN

Grasses and sedges are critical components of native plant gardens. His presentation will explore the best choices and uses of grasses and sedges in gardens to help reduce weeds, feed pollinators, and reduce the need for chemicals.

Monthly Meeting Wrap-up/Summer Tours

Wild Ones Tour: Passive Solar Retreat in Rural Wisconsin

On September 23 we had a dozen enthusiastic Wild Ones members and friends tour the home of Doug and Suzanne Owens-Pike just east of the Twin Cities. It was a beautiful early fall day to explore some of the efforts they have underway. Their home is heated by the sun, passively, through the best orientation of windows, overhang, vines and trees planted to welcome winter warmth, while minimizing summer gain. Lawns are primarily “No Mow” mix of fine fescue. Several inches of compost were tilled into the parent clay soil after construction. No turf irrigation is required and it is cut long ~ monthly. Doug designed and installed rain gardens in the center of the driveway circle and on three sides of their home. One includes a pond (using pond liner) surrounded by native diversity that allows infiltration. The initial design has been enhanced by native volunteer species brought by birds and the wind. Despite its small surface area (10x20’) the pond is a magnet for frogs, damselflies, lightning bugs, and many bird species. Within ~ nine acres surrounding the home site, they have been working to convert old farm fields, now green ash, to a broad diversity of native trees including many conifers and nut trees that deer would destroy if planted outside a protecting fence. New trees include: walnut, American chestnut, hemlock, balsam fir, and arborvitae. Another six acre field outside the deer fence is to be planted with a pollinator mix of prairie species later this fall. If you are interested in attending a future tour or to participate in work days to learn about these techniques, contact Doug at 612-220-1911 or

Douglas@EnergyScapes.com



South side of home showing shade of overhang, and green awning holding grape vines for food and cooling; retaining walls, recovered from old farm home foundation, hide 1,000 gallon cistern with gravity feed faucet.



South lawn, bird feeders and native restoration garden



Pond looking at home from the southwest aspect

September 2017 Conservation Strategies for Big Woods Forests, Dr. Lee Frelich Director of the University of Minnesota Center of Forest Ecology.

This presentation focused on the major forces that are affecting Minnesota's Big Woods Forests. (Note that most of these also affect nearby states and the boreal forest to the north.)

The slide introducing the first prime factor affecting our forests was aptly titled “**War of the Worms**”. Our state has been invaded by European earthworms. In actuality there are no native earthworms to be found in this state. Unfortunately these interlopers are the biggest engineers of the soil affecting its structure, water and nutrient availability, native plant species present, tree growth, wildlife habitat, and the presence of invasive species. Their influence is reflected in the Charles Darwin quote: “It may be doubted whether there are many other animals which have played so important a part in the history of the world as these lowly creatures.”

Currently there are 17 to 18 species of earthworms in Minnesota. The one we are most familiar with is the night crawler (*Lumbricus terrestris*) which is popular as fish bait.



The moving front of earthworms is conspicuous in the forest and it is this stark difference in flora where field studies of the effects on earthworms are often conducted. To obtain counts researchers get the worms to surface by pouring a mixture of water and dry mustard on the ground and grabbing the creatures with a tweezers as they emerge. It is interesting that night crawlers' burrows can be as much as 6 feet deep. Above ground they rustle through the leaf detritus seeking those leaves that they like most and then bring them back to their holes. The dregs are left around these holes, which can be used by researchers to determine their dietary preferences. Studies indicate their order of preference is basswood, maple and then oak. Basswood leaves contain the most calcium which may explain why this is their number one choice. Calcium is involved in a chemical reaction which allows them to breathe during periods when the soil is saturated.

Before the presence of earthworms our forests were covered with dead leaves (duff) which insulated the soil in the summer keeping it cool and moist. As decomposers earthworms ate the duff layer. The direct effect of these removal actions is the creation of a hard mineral surface. Indirectly the compacted surface causes more water runoff which in turn results in drier soils and a lowering of nutrient availability (with the consequence of a 30% reduction in tree growth).

The cascading effects on plant communities includes drought stress; changes in growth rate; alteration in competitive relationships; mortality of plant populations (which lowers the number of species present); facilitation of the growth of invasive species (such as buckthorn, garlic mustard, tartarian honeysuckle) by creating the right seedbed conditions for their growth; and reduction of water quality due to the increased presence of phosphorous. Wildlife in the area are also affected.

In this changing environment there are a few winners: Pennsylvania sedge and Jack-in-the-pulpit. There are many losers: trillium, violets, orchids, and Botrychium mormo (goblin fern). This last native may be the first plant to go extinct as a result of their presence. It is currently listed as threatened in Minnesota.

Note (per Wikipedia) in some parts of Europe, notably the Atlantic fringe of northwestern Europe, *Lumbricus terrestris* is locally endangered due to predation by the New Zealand flatworm and the Australian flatworm.

Tartarian Honeysuckle (*Lonicera tatarica*)

Invades a broad range of habitats – forest edges, open woods, fens, bogs, lakeshores, roadsides, pastures and old fields. This plant alters habitat by decreasing light availability, depleting moisture and nutrients and possibly altering allelopathic chemicals that inhibit the growth of other plants

Leaves: Opposite, oval or oblong, untoothed. Green or blue-green. Stay on longer in the fall.

Flowers: Fragrant, tubular, arranged in pairs at leaf axils.

Reddish pink or white



Beyond the loss of plant native species and an increase in invasive plants, the earthworm has changed the disease dynamics (such as an increase in Lyme disease); reduced forest and crop productivity; reduced soil & water quality; and altered the fire disturbance regime because of the lack of leaf litter)

Deer also have a great impact on the forest. There is a general overpopulation due to a number of factors – primarily a lack of predators (chiefly wolves) and the presence of already fragmented forest areas. The latter means more available edges which is where the deer tend to stay. Some of the affected native plants include:

1. Trillium – deer eat the tops of this plant so they can't grow the following year. In one research project it was found that in areas protected by cages 70% of these flowers survived whereas in unprotected areas only 3% did.
2. Wood nettles are affected where they exist in lower densities. Here we have a “one-two punch” first the invasion of earth worms decreases their density, with deer then more likely to eat the remainder. To further explain, it has been found that only in areas where there is a lush growth of wood nettles deer don't impact the re-growth. It appears that the density break point is 400 plants per acre. If less than that are present there is a decrease in plants. When more are present there is an increase.

In summary:

1. The presence of earth worms leads to a higher leaching rate in soils decreasing the availability of nitrogen and phosphorus and warmer, drier soils, which then leads to forest die-back.
2. A loss of duff leads to a higher deer to plant ratio, with an increase in the presence of sedge because the deer don't like them.



Large flowered trillium (*Trillium grandiflorum*) Photo from: www.minnesotawildflowers.info



Wood nettle (*Laportea canadensis*) Photo from: www.minnesotawildflowers.info

Finally there are impacts due to the fragmented forests themselves and climate change. Currently 1% of big woods remain in Minnesota. With these last two pressures 50% of the species could go extinct. As an example of what does and what does not do well: species such as oak can respond well in this fragmented environment because blue jays disperse their seeds; whereas trillium will not, because their seeds are dispersed by ants. Looking further afield at maples in Wisconsin, in many areas there are little islands of maples in a sea of corn. This circumstance leads to isolation and inbreeding of these trees. In our neighboring state there has been a 60% tree loss in their prairies, 25% loss in fragmented forests and a 1% loss in unfragmented Wisconsin forests. Climate change also leads to the presence of more earthworms and deer with their aforementioned consequences, increased fires, damaging wind storms, pests, and diseases.

So, is there hope given all of these pressures? Can we have all the currently existing species in a 2% area? Dr. Frelich believes this could be possible, because there are many empty areas that can be filled in with plants. Planting native plants in urban areas also helps. Additionally we could maintain the viability of the small forest fragments by reducing the deer population; moving biomes (an action that would require buy-in from the DNR); increasing awareness through outreach programs; and continuing solid science research to support any of these efforts.

Question/Answer Period

1. Are there any natural predators to earthworms? Not really. At golf courses coarse sand has been incorporated into soils on the greens to help ensure a smooth putting surface. The sand is ingested by the worms which shreds their insides, eliminating this pest and the burrows that the dig. This obviously is not a practical solution in other places or on a large scale. The Asian flatworm is a predator which wraps itself around worm, dissolves it and then drinks the juice. However this may just replace one worm with another that could have other consequences.
2. Is it possible to get rid of buckthorn by burning the area? It was found that if an area was burned for 20 years, it got rid of them. Frequent prescribed burns, however, won't work in big woods forests, because unlike prairies, historically this didn't occur so they haven't developed mechanisms to cope with this. So the existing biomes would not bounce back from repeated fires. Maybe over a long period of time (1,000 years) native plants would adapt. This is probably what occurred in Europe where there is one-fifth to one-tenth the density of buckthorn as here.
3. Is the moving of biomes really possible? At this time it would have lots of pushback from the DNR, but as more species disappear they may be more amenable. It may, however, still be the time to look at plants that are growing further south. It was noted that if we followed the Paris Climate Agreement there would likely be a 100 mile biome change by the end of the century. If this accord was disregarded there would be 300 miles change, which is beyond the range of most species. In Minnesota we should expect a wet warmer climate which is favorable for hackberry, red oak, white oak, and Kentucky coffee trees. One could also plant Bald Cypress, and London plane trees here because these trees had cold climates in their evolutionary history which would allow them to withstand our colder climate.
4. One final word of advice was NOT to use Cypress mulch. Trees that may be 1,000 years old are being cut to supply this. Also shredded bark mulch from down south should be avoided

Contain those Crawlers!

Invasive Earthworms in Our Forests

Earthworm photos: Steve Mortenson

Earthworms Invading

Believe it or not, no earthworms lived in Minnesota before European settlers brought them. At least 15 nonnative earthworm species have been introduced so far. Many new infestations get started near lakes, streams, and boat landings, where anglers dump their unwanted bait.

The Harmful Effects

Minnesota's hardwood forests evolved in the absence of earthworms. Without worms, fallen leaves decompose slowly, creating a spongy layer of organic "duff." This duff layer is the natural growing environment for native woodland wildflowers. It also provides habitat for ground-dwelling animals and helps prevent soil erosion, which can degrade fish habitat.

But when European earthworms invade a forest, they eat the duff. Big trees survive, but many young seedlings perish, along with many ferns and wildflowers. Some species return after the initial invasion, but others disappear.

Once they have invaded, earthworms cannot be removed. The only way to protect our worm-free, flower-filled forests is to *prevent* new earthworm infestations.

How Can You Help?

- Don't dump your worms in the woods — it's illegal.
- Dispose of unwanted bait in the trash.

For more about earthworms and ways to help, visit MINNESOTA WORM WATCH at:

www.nrrri.umn.edu/worms

The Forest Floor



Without earthworms, a lush forest floor.



After earthworms invade, much of the beauty is gone.

Gone With the Worms?



False Solomon's Seal



Bellwort



Goblin Fern



Trillium

Goblin ferns have already disappeared from worm-infested soil.

Many woodland flowers, including these three, are sensitive to earthworm damage.



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Nokomis Naturescape (NN) News

A four-acre native planting at Lake Nokomis, 50th Street and Nokomis Parkway, Minneapolis MN 55417

Wild Ones at the Gardens

We had a fantastic 2017 growing season with the rain falling as if we asked for it! Plants thrived and we had a dynamic flow of blooms with pollinator visitors from early spring to late fall. We like to remind visitors experiencing the Naturescape for the first time, that they are getting just a small glimpse of all this ever-changing landscape - that is what makes habitat gardening continually interesting. We added new species this year including Cardinal Flower in the lakeside garden - the hummingbirds soon found it!

THANKS to all the Wild Ones Twin Cities member gardeners for your work and company. We'll meet again next year beginning in April. Get on our email list for current updates on Naturescape volunteering, garden bloom's and wildlife, native plant gardening tips and more. For more information contact Vicki at vbonk@usiwireless.com or call 612-232-8196. Also check out our facebook site to keep current with happenings <https://www.facebook.com/NokomisNaturescape>.

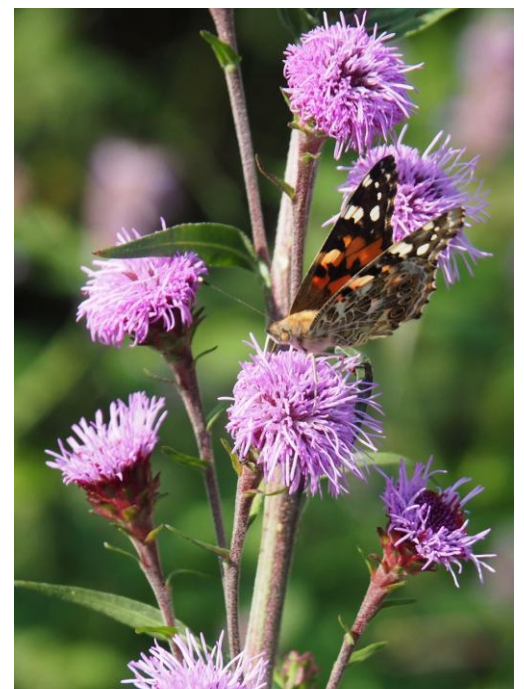


Gardneers Outstanding in the garden

A New Year's Resolution? Adopt-a-Garden for 2018!

Naturescape Gardeners have renewed the Adopt-a-Garden program. Consider giving it a try. Sleep on it for the winter and dream about that warm garden by the lake. Then sign-up next spring for your own garden space. Two Wild Ones Twin Cities members have signed on this year. That's a start! Those gardens already show the extra TLC. Adopting a small section gives it special attention, the gardener gets to know the plants, and one can come anytime during the week, as well as our regular session time. There is a sweet sense of ownership. The garden corners and the lakeside pathway are optimal spaces to adopt. Does this interest you?

Our usual gardening session is Tuesday evening and this is inconvenient for some. This option opens the possibilities. Consider adopting a garden with a friend for company. We will meet beforehand with anyone who would like to consider doing this service. We'll look at garden plot choices and their unique features.



A phenomenal year for Painted Ladies who came to the NN by the hundreds.

Adopt-a Garden is a special way to advocate the benefits of native plant habitat gardening. Give it a try and see how it works for you!

The 9th Annual MINNEAPOLIS MONARCH FESTIVAL

First of all - THANK YOU NN GARDENEERS for all the dirty work in getting our demo garden extra spectacular this year! It's always an extra push to show the gardens at their best so visitors can see habitat gardening

The Wild Ones booth offered a couple of new activities including a photo op with "Flower Power" faces - native blooms with pollinators. Thanks Holley Wlodarczyk for your creative work! Lauri Bruno offered kids a fun butterfly ring activity. Leslie Pilgrim led the Naturescape Nature Treasure Hunt for the third year and gave away milkweeds from Nancy Schumacher (Vagary). Wild Ones Master Naturalists including Marilyn Jones, Liz Stanley and David Crawford gave Naturescape tours, bug walks and native plant habitat info lakeside while Jim Coleman, Roz Johnson and Bill Blood covered the Wild Ones booth

A beautiful sunny day brought thousands of people to Lake Nokomis for this colorful festival celebrating the Minnesota/ Mexico monarch migration. This unique bilingual event (<http://www.monarchfestival.org/>) is dedicated to monarch conservation. Festival participants learned more about monarchs and habitat first-hand from the experts (U of M Monarch Lab, Monarch Joint Venture, Wild Ones, US Fish and Wildlife, US Forest Service, native plant vendors and many more); shared their own monarch experiences; and enjoyed a day by the lake with music, dance, art, theater, nature activities and food. And importantly brought home native plants including milkweeds along with inspiration and knowledge. We are GROWING HABITAT!



Wild Ones new Flower Power faces.

Hundreds of Monarch Festival attendees printed this original Sarah Nassif souvenir poster highlighting NN nectar plants.



NATIVE PLANT SEED COLLECTION TIPS

Always ask permission to collect from land not your own.

Take no more than 1/3 of the seed of one plant and never use more than 1/3 of the plants at a site. This ensures genetic diversity and that you leave seed for wildlife and self sowing.

Seeds are usually ripe about a month after flowering when:

- they fall easily from the plant
- pods lose their green color and turn brown
- the stem holding the seed head is brown and dry
- the seed capsule opens
- about a month after flowering
- ripe seeds are plump, hard and usually brown or black; unripe seeds are still soft and green.

Collecting and bagging:

- Select seed heads with stems long enough to bundle together.
- Place those with dry, easily scattered stems/seeds into paper bags right in the field.
- To speed drying, remove leaves from stems with a quick stripping motion. Don't worry if you miss a few!
- Suspend bags or thick stems in an unheated room out of direct sunlight.
- Label each variety, along with when and where collected.
- To minimize seed loss, put all but the thickest stalks head-down into a paper bag.

Storing:

- Check every 7 to 10 days for dryness and rodent damage.
- Rotate the larger, thicker stalks.
- When they are dry enough, separate seeds from plant parts and transfer to labeled glass jars.
- Store jars away from areas with fluctuating temperatures, *but* where you will remember to visually check for moisture.
- Do not refrigerate or mix with sand until you decide which propagation method and time table to use.

For Planting: Consult PrairieMoon.com for more specific species propagation method.



2017 Officers

Co-Presidents: Marilyn Jones/Julia Vanatta
Secretary/Phones: Joelyn Malone
Treasurer: Rita Ulrich

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Outreach: Laurie Bruno
Partner Liaison: Holly Breymaier
Print Materials: Doug Benson
Programs: Roz Johnson/Holley Wlodarczyk
Public Relations: Holly Breymaier
Tours: Jim & Jan Coleman
Volunteer Coordinator: **OPEN**
Website : Julia Vanatta/Holley Wlodarczyk

Chapter Message Center: 612-293-3833

MEMBERSHIP: Benefits To You

- Monthly meetings featuring excellent presentation on a wide array of native landscaping topics.
- Receive the new member packet.
- Receive the bi-monthly Wild Ones Journal, with articles and information to inspire and educate you about natural landscaping.
- Free admission to most Wild Ones' events, such as our garden tours, native plant walks and sales/swaps.
- Reciprocity with other chapters' meetings.
- Share experiences and expertise with other like-minded native gardeners.
- Access to the Wild Ones library of native landscaping books.
- Support for the Wild One's Mission.
- Membership dues and donations are tax deductible

Join or Renew

1. Sign up at a meeting, or
2. Call MEMBERSHIP at 612-293-3833, or
3. Access the national website at www.wildones.org



Twin Cities Chapter
c/o Marty Rice
4730 Park Commons Dr. #321
St. Louis Park, MN 55416
Chapter Website: www.wildonestwincities.org

OUR MISSION

Wild Ones: Native Plants, Natural Landscapes promotes environmentally sound landscaping practices to preserve biodiversity through the preservation, restoration and establishment of native plant communities. Wild Ones is a not-for-profit environmental education and advocacy organization.