MILDONES. Reflections

EDUCATING THE PUBLIC ABOUT THE BENEFITS OF PRESERVING AND RESTORING BIODIVERSITY OF OUR NATIVE PLANT COMMUNITIES, BEGINNING IN OUR OWN YARDS AND GARDENS.

Why WILD ONES Matters

Dynamic Duo
Wasps: Spotlight on
Beneficial Insects

Garden Showcase

Making a Large Impact

on a Small City Lot

The Importance of Keystone Species



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Wild Ones in the Field

Virginia bluebells Photo: Kathleen O'Connell

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"We welcome everyone to the magic of community."

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Cover photo: Travis Bonovsky. Yellow Warbler with caterpillar.

WHY DOES WILD ONES MATTER?

Eva Ekola, Wild Ones Big River Big Woods chapter president

The magic of community is that we can do and be more together. The same is true of plants. Healthy native plant communities are the base that our ecosystems need, and frankly, what the future of our world needs. We have learned empirically from the research at the University of Minnesota's Ce-

dar Creek Ecosystem Science Reserve that a greater diversity of native plants makes for more resilient ecosystems. Similarly, we humans do better when we live and work together. (Although we all need alone time, too!) The pandemic has demonstrated that we really need community. Our Wild Ones chapters are communities for native plant gardeners. We learn and grow together. Our Big River Big Woods chapter has a tradition of lightning talks for our January program. Members give five minute talks about a favorite native plant project. You can feel the excitement of our shared passion for "wild gardening" during these sessions. We connect and learn from one another. Our other chapter activities such as expert presentations, native plant sale, service projects, and guided tours unite us as well. As "Wild Ones" we work to restore healthy native plant communities and engage our human community, too. We welcome everyone to the magic of community.



Big River Big Woods members helping with restoration at Snail Lake Regional Park with Ramsey-Washington Metro Watershed District.

"We abuse land because we regard it as a COMMODITY belonging to us. When we see land as a COMMUNITY to which we belong, we may begin to use it with love and respect." Aldo Leopold, from his book <u>A Sand County Almanac</u>



Left to Right: A happy Big River Big Woods member, Rick Sanders, with his new plants. Big River Big Woods members on a spring ephemeral tour led by Eric Vehe. Erica Tenbroek and Liz Wendland lending a hand at the Big River Big Woods chapter native plant sale. Note: none of these images were taken during the pandemic.

Wasps:

SPOTLIGHT ON AN IMPORTANT BUT OFTEN MISUNDERSTOOD GROUP

By Heather Holm, Prairie Edge chapter

Wasps are a diverse group of insects that belong to the order Hymenoptera. This order also includes sawflies, horntails, ants, and bees. In North America (north of Mexico), there are approximately 13,000 species of wasps; the majority are parasitic wasps; that is, they do not build their own nest and instead lay their egg directly in or on their host. The remaining wasps, the Aculeate (stinging) wasps, include both social and solitary species.

Lobed mason wasp (Ancistrocerus antilope) on mountain mint.



Where do bees fit into the equation? Bees are essentially hairy wasps that are closely related to Aculeate solitary, predatory wasps. Rather than feeding their offspring insects or spiders as wasps do, bees transitioned to providing their offspring a plant-based diet—pollen, nectar, and in rare instances, floral oils.

Many insects, including some bees and a majority of herbivorous (plant-eating) insects, are specialists with a narrow diet or a limited number of host plants that the larvae consume. Solitary, predatory wasps



Gold-marked thread-waisted wasp (Eremnophila aureonotata) on horsemint.

are no different. Many are also specialists hunting only spiders or insects belonging to one family, or more narrowly, one genus. It is this prey specificity and the native host plant specialization of their prey that can make certain types of wasps prevalent in specific plant communities. In addition, like ground-nesting bees, many solitary ground-nesting wasps have very specific soil nesting preferences. For instance, the four-banded sand wasp (Bicyrtes quadrifasciatus) nests in bare, loose sand and hunts true bug nymphs and adults (plant-feeding bugs) in vegetation near the nesting site. Similarly, most mason wasps (subfamily Eumeninae) hunt only caterpillars (moth larvae) to provision their aboveground cavity nests.

Wasps and Native Bees Need the Same Things

To fuel the mate-searching, prey-hunting, and nest-building activities, the primary food source for many Aculeate wasps is flower nectar. In the Upper Midwest, there are a number of native plants that wasps preferentially visit to consume nectar ("Dynamic Duos" in a broad sense)—mountain mint (Pycnanthemum virginianum), dotted horsemint (Monarda punctata), rattlesnake master (Eryngium yuccifolium), swamp milkweed (Asl-



A four-lined female sand wasp (Bicyrtes quadrifasciatus) with stink bug prev clasped beneath her.

cepias incarnata), and boneset (Eupatorium perfoliatum)—to name a few. Like bees, wasps need diverse, native landscapes that provide nesting opportunities, an abundance of prey, and native flowering plants. If you can provide these three main habitat components, wasps will return the favor by helping to keep some of the pest insect populations in control and provide incidental or direct pollination of many of the native flowering plants you grow in your garden.

A comparison of food provisions in a bee and wasp cavity nest.

An orchard mason bee nest with pollen/nectar provisions.



A mason wasp nest provisioned with caterpillars.



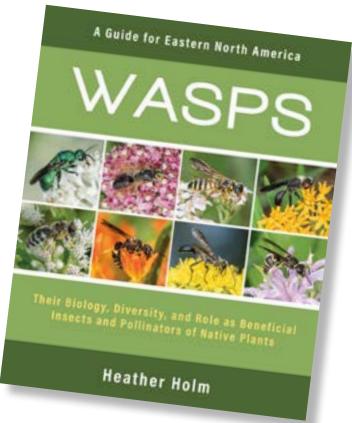
Great golden digger wasp (Sphex ichneumoneus) on rattlesnake master.



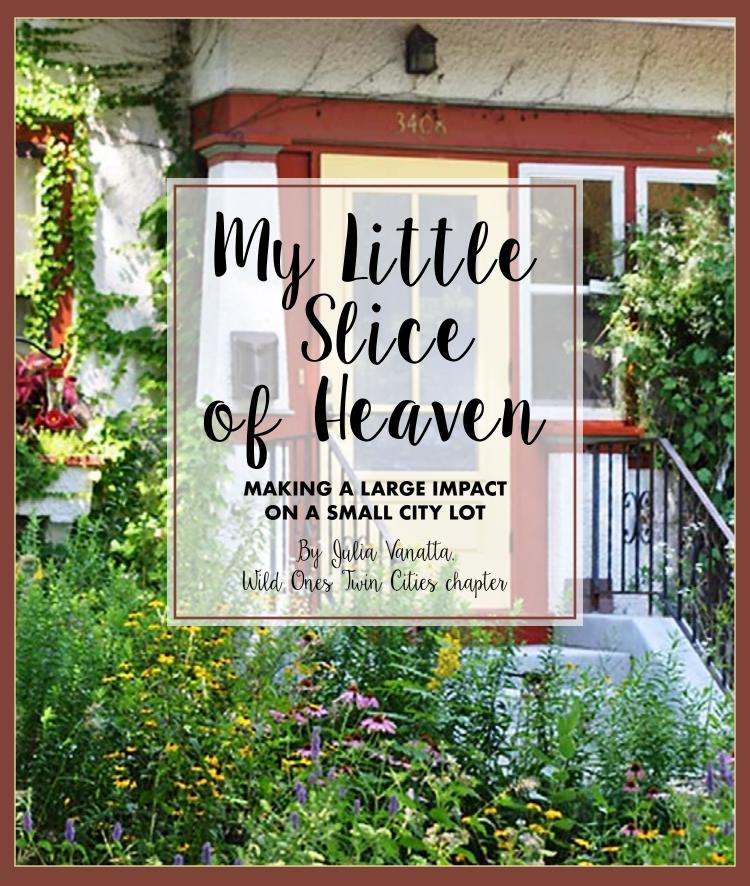
Heather Holm's latest book,

Wasps: Their Biology, Diversity, and Role as Beneficial Insects and Pollinators of Native Plants, is available for purchase at Pollination Press.

All images are courtesy of Heather Holm



GARDEN SHOWCASE



hen my husband and I first moved to the neighborhood in 1979, our yard was mostly grass with a few shrubs, perennials, and bulbs planted along the foundation. We did what every other new homeowner would do: we bought a lawnmower, treated the lawn for dandelions, and maintained a neat and tidy manicured look. The so-

> cial norm! If I didn't keep the lawn mowed, my neighbor Ralph would jokingly suggest I get a goat!



"My little slice of heaven in the city provides big habitat for wildlife. A small, modest bungalow on a narrow, 40foot wide lot in Minneapolis. not far from the only gorge along the mighty Mississippi.

About the same time we bought our house, a grassroots movement was starting to take hold. The water in our City of Lakes had become contaminated by stormwater runoff from yard and street chemicals. Our natural areas were being consumed by invasive species, and migratory birds were struggling to find food as they passed through the city each spring and fall. Various organizations started campaigns to change the way we manage our own, personal spaces. While our small city lot was a manageable size, mowing was not my favorite pastime. These blossoming organizations provided the gentle nudge I needed to reduce my lawn size and add more native plant gardens.

Lead plant, royal catchfly, partridge pea, purple coneflower, and nodding wild onion are among the many native species planted throughout the yard.

I started introducing native plants to my gardens about 20 years ago. I missed being surrounded by the natural world of my childhood but I also loved the cultural diversity of city life. Driven by nostalgia, each time I visited my mother I admired the native plants abundant in my hometown. And so my transition to natives began. Today, my small city lot is a National Wildlife Federation (NWF) Certified Wildlife Habitat and it feels much bigger than it actually is. While there are a few remnant plants from my original garden, most have been replaced with native plants.

Now, there are no lawns to mow, no leaves to rake, and no pests to kill. Trees and shrubs offer shelter, privacy, and shade for both humans and wildlife. Native plants and ground covers provide nectar, pollen, and foraging for birds and insects. The woodland backyard is an intimate and cozy retreat. And my boulevard and front yard gardens are welcoming to the children and adults who walk by and stop to get a taste

of nature. What was once lawn is now teeming with life, supported by over 160 species of native plants in managed gardens and naturalized areas. A funny thing happens when you embrace nature: it begins to embrace you.

The land you inhabit with nature comes to life and speaks to you, taking you on an adventurous journey in your own back-yard. You begin to appreciate all the life forms you had forgotten about, from fireflies to bumblebees, finches to Cooper's hawks, chipmunks and yes, even a fox. As my neighbors see the bumblebees and other wildlife in my yard, they are excited to expand their own habitat gardens. The unexpected joy of living with the land—and its creatures—brings you back full circle to the homage of the woods where you danced as a child. "I am living wild in the city and wouldn't have it any other way."



Dappled light in the woodland gardens showcase spring ephemerals such as the celadine poppy (Stylophorum diphyllum).



A strip of boulevard is also planted with natives. All photos by Julia Vanatta

Q&A THE CURIOSITY CORNER

By: Travis Bonovsky | Nature Photographer

Ouestion: How do I create a healthy environment for birds in my yard?



Tennessee warbler sipping wild plum nectar.

Answer: Although some adult birds may supplement their diet at bird feeders, the vast majority of North American land birds depends heavily on insects for sustenance, such as insect larvae (especially caterpillars), spiders, and other insects. In North America, it's estimated that more than 440 bird species rely on insects during at least some part of the annual nutrition cycle. Insects provide birds with protein to sustain not only themselves, but their offspring as well. Since regionally native plants are the foundation of food webs and usually have specialized relationships with particular insects, maintaining a wide range of native vegetation in your own garden and yard will increase not just insect volume and biomass, but also a variety of different insects.

We typically only notice birds carrying insects during nesting season when parents are seen returning to their nestlings with mouthfuls of bugs and larvae. People are often surprised to learn how dependent birds are on insects, as insect-eating behavior often goes unnoticed. When birds forage for themselves, they quickly consume their prey and continue looking for more food. For example, when the small and colorful warblers return to our area each spring, they spend most of their time searching for easy-to-grab, calorie-dense caterpillars to replenish their energy. It's challenging to spot a warbler with an insect in its mouth unless it is foraging for food for its young.

It was a love for birds that stirred me to convert a large portion of my yard to native plants. One of the first things I noticed in my yard after I started adding native plants was a single dragonfly. It struck me as odd, as I had never seen a dragonfly in my yard before. Over the years, I have created multiple layers of vegetation—overstory trees, understory trees and shrubs, and groundcover of varying species and heights—to attract insects and create sheltering and nesting habitat for birds. I now see dragonflies everywhere in my yard!

In addition to insects, many birds also eat the seeds and fruits of native plants, and even sip nectar from plants, shrubs, and trees. Regionally native black cherry, chokecherry, serviceberry, elderberry, dogwoods, and viburnums are among the most popular trees and shrubs I have seen birds visiting throughout the seasons. Fruits generally require less effort for birds to obtain as compared to insects. Fruits on trees and shrubs are often gobbled down quickly after being discovered. Oftentimes, larger birds need to get a little creative about reaching the ripest berries. The ripest fruits tend to be located on the outermost edges of a plant where there aren't stable perches. This is when birds often pull off acrobatic poses, or even hover in mid-air for short bursts while plucking the best fruits. Common fruit-eating birds include the American



Scarlet tanager with black cherry.

robin, cedar waxwing, gray catbird, scarlet tanager, rose-breasted grosbeak, eastern kingbird, and various vireo species. Vegetation with fragrant blossoms such as crabapple or wild plum, often attract Baltimore orioles, ruby-throated hummingbirds, and many different warbler species.

All photos by Travis Bonovsky



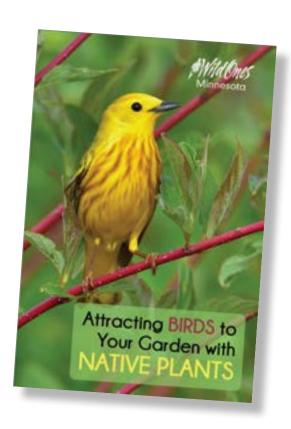
Attracting Birds to Your Garden with Native Plants

Last spring the Wild Ones Prairie Edge chapter produced a wonderful guide titled Attracting Birds to Your Garden with Native Plants. The free guide offers an excellent review of birds and their preferred food sources. The booklet ranks native trees, shrubs, perennials, grasses, and sedges for relative nutritional value for birds. An interesting fact from the guide: oak trees are a host plant for over 500 species of caterpillar juicy caloric morsels of protein for birds! No wonder oaks are considered a keystone species. Visit https://www.wildonesprairieedge.org to order this free guide.



Top: Eastern bluebird with a moth.

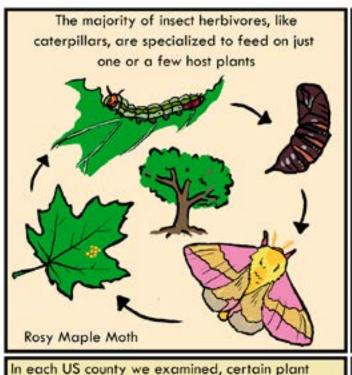
Bottom: American goldfinch with liatris seed. Goldfinches are one of the few "all vegetarian" birds in the bird world.

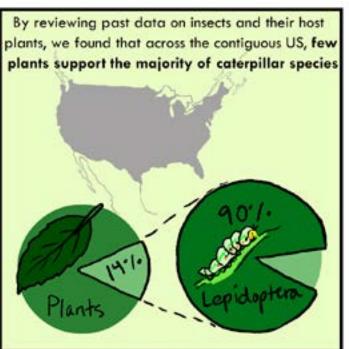


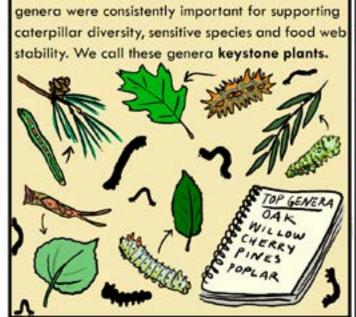
Have a Question? Send it to the Wild Ones Twin Cities periodical editors HERE! [info@wildonestwincities.org]

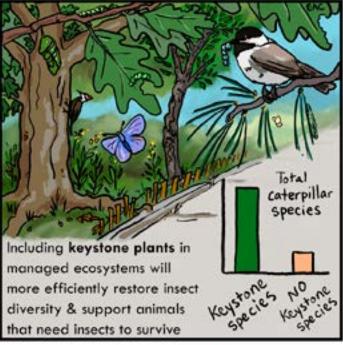
THE IMPORTANCE OF KEYSTONE SPECIES

A great graphic that hits home the importance of planting keystone tree species that support food web stability: Regionally native oak, willow, cherry, pines, and poplar. Learn more.











Narango, D.L., Tallamy, D.W. and Shropshire, K. J. 2020. Few keystone plant genera support the majority of Lepidoptera diversity. Nature Communications Access the paper here: https://rdcu.be/caKj5



Art: Elsa Cousins



From the Designer's Desk

Andy Scott,

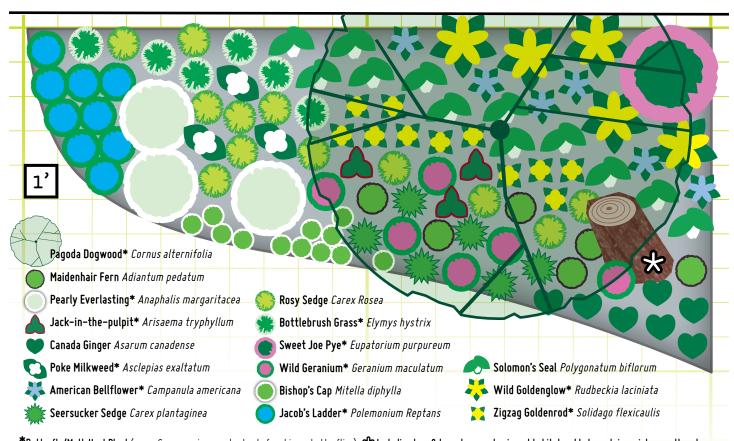
ReWild Native Gardens, LLC

Native Woodland Garden for Dry Shade

Shade/Part Shade | Dry to Mesic | Average Soils

Design Notes & Site Recommendations:

- Adapt this plan to fit your site. This example shows a roughly 20' x 10' area (curved corner bed).
- A good design for tough, shady, dry spots, or shady micro-climates, such as under coniferous trees (spruce or pine), the north side of a building or slope, or a shaded corner of the yard.
- Dry shade plantings can be challenging to establish. Consider adding a layer of organic material (e.g., leaves or mulch) to aid initial establishment and retain moisture.
- This example assumes the bottom left corner will get slightly more sun (part shade). Plants in this quadrant (Jacob's ladder, pearly everlasting, bottlebrush grass) will benefit from more light.



*Butterfly/Moth Host Plant (many Carex species are also hosts for skipper butterflies) 🕏 Including logs & branches creates insect habitat and helps retain moisture as they decay.

About the Designer Andy Scott founded his native garden landscape and design business in 2017. He has helped residents and commercial properties convert lawn and wasted space to wildlife-friendly gardens that support a myriad of organisms including beneficial insects and birds. Andy enjoys involving his clients in design and planning phases and encourages them to help with planting so they can demystify the plant/pollinator relationships that they will be fostering.

Contact Andy: hi@rewildgardens.com | 612 385 2417 | www.rewildgardens.com



WEB of LEARNING

Online Resources to Link, Connect, and Expand Knowledge

What is Rewilding?

"Rewilding begins with recognizing native plants as the bases of the local food web. Native plants are essential for populations of insects that in turn support birds which serve as the bellwether of ecological health and resiliency." Read more in the link.





Monarch Research Review:

2020 (Monarch Joint Venture) A comprehensive review that covers topics of habitat quality and conservation, monarch populations and biology, as well as goal setting and community involvement in conservation.

Wild Ones Native Gardens Designs

Free downloadable native garden designs created by professional landscape designers for multiple ecoregions in the United States, taking into account various light, soil and moisture conditions.





Ladybugs of Minnesota

Identifying insects in our gardens is a great way to connect and engage with the habitats we create. Citizen science participation in and reporting to the Lost Ladybug Project is key to understanding where the imperiled nine-spotted, two-spotted, and transverse ladybugs still live in order to understand approaches to preservation. Your garden may hold the answers!

WHAT WE'RE READING, WATCHING & HEARING

What We're Reading...

The Prairie Ecologist blog



Essays, photos, and discussion about prairie ecology, restoration, and management.

What We're Watching...

One big reason trees often don't



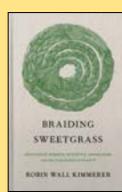
make it past a 20-30 year lifespan is improper planting. With climate change, trees need to be planted for longevity more

than ever. This excellent six-minute

<u>Tree Trust tree-planting tutorial</u> will help
ensure that you've indeed planted
shade for the next generation.

What We're Hearing...

What's better than reading the book <u>Braiding Sweetgrass</u>? Having Robin



Wall Kimmerer read it to you. Her calming voice and beautiful storytelling will inspire you to go forth and heal the Earth.

WILD ONES-In the Field

Chapter/Membership Information



Northfield Prairie Partners Wild Ones member, Bill Jokela, transplants native plants into his "Pocket Prairie" planting.



Wild Ones Reflections

Leslie Pilgrim: Editor Doug Benson: Design Andy Scott: Art Direction

A special thank you to this issue's contributors:

Barb Bolan Travis Bonovsky Eva Ekola Heather Holm Desiree Narango Andy Scott Julia Vanatta

Lawns to Legumes Program and the Northfield Prairie Partners

By Barb Bolan, president, Northfield Prairie Partners

In late 2019, Minnesota dedicated \$900,000 for a new cost-share program, <u>Lawns to Legumes</u> (L2L), designed to encourage homeowners to convert lawns into bee-friendly habitats. For one type of L2L project, "Neighborhood Demonstrations," teams submit grant proposals to transition multiple yards in a neighborhood into pollinator friendly habitats.

The Northfield Prairie Partners Wild Ones chapter teamed up with experts from Carleton, St. Olaf College, and the Rice County Soil and Water Conservation District to submit a Neighborhood proposal. We were delighted to be awarded a \$20,000 grant. Since we targeted neighborhoods where rusty-patched bumblebees—a species of focus in the L2L program—have been sighted, we required only a 10% match. This match was easily covered by planning work and homeowner labor.

We worked closely with 21 selected homeowners to help them draft plans that were ideal for their yards or boulevard strips. In accordance with the grant program, participants could choose to create bee lawns, pocket prairies, native shrub plantings, or rain gardens, or combinations thereof. Our neighborhood demonstration project sizes ranged from 25 square feet to over 150 square feet.

Pocket prairies are small free-form areas filled with native plants and grasses that provide flowers throughout the growing season for pollinators to enjoy. Plantings near sidewalks or in boulevard strips have short flowers or sedges along the edges to avoid interfering with sidewalks or sight lines. Bee lawn mixes, as determined by the state, contain fescues plus some short flowers, such as Prunella (heal-all). These lawns are maintained



with a 3- to 4-inch minimal mowing height. We experimented with adding some *Fragaria virgininia* (wild strawberry) and *Chamaecrista fasciculata* (partridge pea) and will find out how that worked this summer. We can't wait to tour the yards to see how well they attract pollinators and how attractive they are to people as well!

Left: Wild Ones members, Terry and Norma Gilbertson, anxiously await planting time so they can remove the tarp and get going on their pocket prairie. Last season the Gilbertsons used their Lawns to Legumes grant to plant a native plum with a self-heal "green mulch" surrounding the tree. The couple's project also includes strips of prairie plantings along the edges of the backyard, a pagoda dogwood, and a back border of native clematis vines.

Want To Volunteer?

Check out chapter websites to sign up for volunteer opportunities around the state. Thank you.

LEARN MORE and JOIN the movement at wildones.org



ALL MONTHLY TOPIC MEETINGS ARE FREE AND OPEN TO THE PUBLIC!*

*All events are subject to change or cancellation due to COVID-19. Many chapters' meetings/presentations are virtual this spring. See individual chapter websites for further information.



WILD ONES MEMBERSHIP BENEFITS

WHO WE ARE... Wild Ones is a nonprofit organization whose purpose is to provide learning and field experiences to those interested in Minnesota native plant landscaping and environmental education.

WHY JOIN?

LEARN more about native plant landscaping and related topics during our monthly programs from experts in the field. Minnesota Wild Ones Chapters also sponsor an annual Design with Nature conference in February.

SUPPORT our mission by purchasing local native wildflowers, grasses and shrubs during our annual spring native plant sale.

TOUR local homeowners' native plant gardens and yards during the summer months.

VOLUNTEER at Wild Ones sponsored community activities, such as the Minneapolis Monarch Festival and native plant habitat gardening at Nokomis Naturescape in Minneapolis.

SHARE and connect through regular email and quarterly newsletters or get up-to-date program information on our website.

ENJOY getting to know people who share your interest!

\$40 tax-deductible annual membership includes the national organization and local chapter.

Wild Ones Reflections is published periodically by the Twin Cities Wild Ones chapter with contributions from Wild Ones chapters throughout the state.