2025 GARDEN TOUR of Unity North Spiritual Center

11499 Martin St NW, Coon Rapids, MN 55433

BIODIVERSITY: THE BIG IDEA

To protect biodiversity, our communities need to conserve (or create!) wildlife habitats. The urban ecosystem, made of mostly private property, is full of conservation opportunities to provide wildlife habitat, biodiversity, improve ecosystem functions, and connect with nature (Lerman et. al. 2023). Even around the perimeter of a parking lot, a biodiversity-friendly landscape can be created and continually improved by thoughtful plant choices and providing wildlife habitat features.



WALK WITH US!

Start at the front gardens and follow the numbered signs around the parking lot.

1. HOMEGROWN NATIONAL PARK

Unity North is on the map!

The areas behind the retaining walls are planted with native flowers and that square footage is registered on <u>https://homegrownnationalpark.org/</u>.

3. ROOM FOR COMPROMISE

While the plants behind the retaining wall are all natives, the plants in front of the retaining wall are a mixture of natives, various pollinator plants, and other ornamentals.

Having at least 70% native plant biomass was enough to provide a sufficient density of caterpillars to support songbird bird populations (Narango et al. 2018)...so, if people enjoy some hosta, dahlias and a few showy noninvasive ornamentals, it's not a problem. A lack of native plants is a problem!

2. NATIVE FLOWERS

There are at least 16 species of native plants at the front entrance of the building.

Along with providing food in the form of nectar and pollen, most native plants are a host plant for caterpillars. Many caterpillars are specialists, and can only feed on certain plants (e.g. milkweed).

Flowers are available from early spring (Penstemons) through late fall (asters).

Check the plant labels to see what is doing well. Most of the natives were planted in 2021 (from seed) and 2023 (from plugs).



4. MONARCH WAYSTATION

https://www.monarchwatch.org/way stations/

In addition to being registered on Homegrown National Park, the area with the abundant common milkweed is a registered monarch waystation.

There are currently 3 species of milkweed around in the gardens.

- Common milkweed
- Swamp milkweed
- Butterfly weed



5. INATURALIST HIGHLIGHTS DISPLAY AND POLLINATOR INFORMATION

Many wildlife observations at this location have been documented on iNaturalist. To see these wildlife observations from the iNaturalist website, select explore, and put in the address of UNSC and draw the bounding box around the site. Then you can click on all the markers to see what's been documented.

There have been at least 18 species of butterflies and moths photographed at UNSC.

Do you know Minnesota has a state bee? It's the Rusty-patched bumblebee. You've probably seen it on license plates and it's been observed here at UNSC! Here are the iNaturalist links:

- <u>https://www.inaturalist.org/observations/9362</u> <u>4811</u>
- <u>https://www.inaturalist.org/observations/9362</u>
 <u>4812</u>
- <u>https://www.inaturalist.org/observations/9428</u> 5254

There are 24 species of bumblebees in Minnesota and so far 9 have been photographed at UNSC!

iNaturalist 'Explore' view around UNSC



6. INVASIVE SPECIES

Spotlight on buckthorn, garlic mustard, and black locust. Many people can't identify these invasive plants and don't know why they are problematic. As long as these invasives are here (hopefully not much longer), here's an opportunity to make sure you can identify them. **Make hands-on display area with pulled out specimens.**

- 1. Buckthorn
 - a. About half of the buckthorn has been removed from this location.
 - b. If you Have buckthorn to remove, but don't have time to remove all of it, be strategic. Start with the female plants producing berries.
- 2. Garlic mustard
 - a. Garlic mustard has been eradicated from UNSC several times; however, recent construction east of the parking lot stirred up an incredible seed bank. Can you identify garlic mustard?
 - b. Best way to remove? Probably it depends on the situation.

3. Black locust

Minnesota DNR information for invasive terrestrial plants:

https://www.dnr.state.mn.us/invasives/terrestrialplants/index.html

Minnesota Department of Agriculture pages:

https://www.mda.state.mn.us/plants/pestmanagement/weedcontrol/noxiouslist/commonbuckth orn

https://www.mda.state.mn.us/plants/pestmanagement/weedcontrol/noxiouslist/blacklocust https://www.mda.state.mn.us/plants/pestmanagement/weedcontrol/noxiouslist/garlicmustard

7. SUSTAINABLE FORESTRY PRACTICE ON 122' X 10' AREA

On the south end of the parking lot, there was a broken tangle of hazardous Box elder trees. The wood was left on site to meet the standard of the MN forest management guidelines. These guidelines recommend creating or retaining two to five bark-on down logs (pieces >6 ft. long and > 6 inches diameter) per acre when harvesting trees.

Why? As the wood decomposes, it contributes to the habitat of many species and returns nutrients to the soil. In other words, large logs help mitigate the biodiversity crisis and contribute to ecosystem health.

This wood is a nesting habitat for many pollinators and it pairs nicely with food sources in the flower garden. Pollinators don't have to use much energy foraging when they can nest close to food sources.

UMN Extension Forestry: Building biodiversity in your forest: Cavity trees, snags, and deadwood



8. LIGHTING

What does lighting have to do with Gardening? If you are gardening for wildlife and trying to mitigate the biodiversity crisis, <u>darksky.org</u> is a great resource to help make lighting decisions. Harmful effects to wildlife from light pollution include: exhaustion, collision, incineration, dehydration, increased predation, blindness, and disruptions to circadian rhythms foraging, mating, and reproduction (Owens et al. 2020).

Oops, UNSC didn't find out about YELLOW LED lights until after we bought white ones for the parking lot.

"Do the best you can until you know better. Then when you know better, do better." —Maya Angelou

9. BUR OAK, A KEYSTONE PLANT SPECIES

A keystone plant species is critical to the food web and necessary for many wildlife species to complete their life cycle.

11. THE ENDANGERED ASH TREE

The International Union for Conservation of Nature and Natural Resources Lists the species as critically endangered in North America as of 2017.

Do you know of an ash tree that looks healthy that has not been treated for Emerald Ash Borer (EAB)? If so, keep an eye on it! Such ash trees are called 'lingering ash' or 'survivor ash.' It's been estimated that 0.5% of green ash trees show resistance to the beetle. Currently, researchers are looking for survivor ash in parts of Michigan and Ohio. <u>https://www.fs.usda.gov/nrs/tools/ash/</u>

10. SOFT LANDINGS AND LEAF LITTER

After feeding in a canopy of leaves, many caterpillars drop to the ground to pupate. Look at the Bur Oak and think about places a caterpillar might land when it is ready to drop to the ground.

The best chance for surviving is a layered landscape under a host tree, where a caterpillar can have soft landing then burrow in soil or spin a cocoon in leaf litter.

If a caterpillar lands on compacted ground (e.g. frequently mowed turf), the caterpillar might not be able to borrow into the soil to pupate and complete their life cycle.



12. REWILDING WITH NATIVE PLANTS

We hope you come back again to see the future rewilding, especially on the east side of the parking lot where the more buckhorn gets removed, and the south end of the parking lot gets rewilded with native plants, including tree species that will become large.

Do you have an area to rewild? Here are some resources for tree and plant recommendations:

- Rewilding your backyard woods: Recommended trees for East Central Minnesota: <u>https://extension.umn.edu/natural-resources-news/recommended-trees-east-central-minnesota</u>
- Rewilding your backyard woods: Plants to try for East Central Minnesota: <u>https://extension.umn.edu/natural-resources-news/rewilding-your-backyard-woods-plants-try-east-central-minnesota</u>

THANK YOU FOR TAKING THE 2025 UNSC GARDEN TOUR!

REFERENCES

Blossey, Bernd, et al. "Residence time determines invasiveness and performance of garlic mustard (Alliaria petiolata) in North America." *Ecology Letters* 24.2 (2021): 327-336.

Brown, Ross N., Alan R. Ek, and Michael A. Kilgore. "An assessment of dead wood standards and practices in Minnesota." (2006): vi+-45.

Lerman, Susannah B., et al. "Humanity for habitat: Residential yards as an opportunity for biodiversity conservation." *BioScience* 73.9 (2023): 671-689.

Owens, Avalon CS, et al. "Light pollution is a driver of insect declines." *Biological Conservation* 241 (2020): 108259.

Minnesota state land portfolio <u>https://www.dnr.state.mn.us/slam/land-portfolio.html</u> (Accessed July 5, 2025)

Sustaining Minnesota Forest Resources: Voluntary Site-Level Forest Management Guidelines for Landowners, Loggers and Resource Managers (p.54)

https://mn.gov/frc/assets/MFRC Revised Forest Management Guidelines w links tcm1162-507039.pdf (Accessed July 5, 2025)

THIS RESOURCE WAS WRITTEN BY JENNIFER FLYNN AND DESIGNED BY ANNIE HARVIEUX.