



Leafings

A Newsletter of the Nebraska Statewide Arboretum
Fall 2024

plantnebraska.org



NSA members enjoyed a tour of the beautiful pollinator garden at St. Leo's Church in Omaha as part of Member Appreciation Week.

A Show of Appreciation

Members, we hope you know how much we appreciate your support! One way we try to express our gratitude is by hosting Member Appreciation Week each summer—five days of free events just for members.

This July 15-19, dozens of NSA members joined us for a virtual Q&A with NSA Horticulture Coordinator Bob Henrickson and NSA Green Infrastructure Coordinator Justin Evertson and a fascinating presentation about insects and plants with Jenny Hopwood of Xerces Society.

Members also enjoyed guided tours of the gorgeous gardens and arboretum at Metropolitan Community College in Omaha and of the pollinator garden at St. Leo's Church in Omaha, where NSA grants have helped create a sanctuary of peace and beauty in the midst of the city.

During Member Appreciation Week, NSA members also enjoyed free admission to Lauritzen Gardens in Omaha. We rounded out the week with a rousing game of "Tree-via" at Zipline Brewing Company in Lincoln.

"All the offerings for Member Appreciation Week were great," said NSA member Debbie Brozanic. "Your work really matters and makes a huge difference!"

Thanks, Debbie! And many thanks to all of you who help us Plant Nebraska all year long.



Mission

We plant Nebraska for healthy people, vibrant communities and a resilient environment.

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A Message from the Executive Director

Happy fall everyone! Fall is my favorite. The good weather (usually) returns, there's color everywhere, and the best holidays are in the fall (Halloween, anyone?).

While I look forward to fall, I would be remiss if I didn't reflect on all the wonderful work we've accomplished throughout the summer. In this issue you'll read about Wildflower Week, Member Appreciation Week and a trip to Bessey Nursery.

We also have some great news about the \$10 million Inflation Reduction Act (IRA) funding. We recently awarded the first \$300,000, and there will be much more of that to come! We look forward to working with more communities over the next five years to transform Nebraska's community forests.

Now onto fall! Our popular Garden Walks are back in September, and in October our annual Plants & Pints event will feature former NSA Executive Director Jim Locklear talking about his new book *In the Country of the Kaw*. Be sure to get your copy now so he can sign it for you at the event. We're also partnering with the Nebraska Forest Service in October to host the Trees, People, & Towns conference for land and tree managers across the Great Plains who will come together to network and learn. See a complete list of our fall events on page 4.

None of this wonderful work, both past and upcoming, could happen without year-round support. If you're pleased with what we've been up to, we'd appreciate a gift of any amount. We made it easy: just use the enclosed envelope or donate online at plantnebraska.org/donate. Thank you for your continued support. Now, let's go walk in some crunchy leaves.



Hanna Pinneo
Executive Director
Nebraska Statewide Arboretum



New Tree & Plant Resources

We've been busy bees this summer creating a bunch of new resources to help your yard, garden, trees and flowers thrive. Visit our YouTube channel and click "playlists" from the menu to access five new videos from our "Make a More Waterwise Landscape" series and four new videos from our "Community Forest" series.

Plus we have free handouts ready to download and print: Top 10 Recommended Trees for Eastern & Western Nebraska, Rain Gardens 101, Lawn Alternatives, Instructions for How to Plant a Tree and Watering Guidelines for Newly Planted Trees. Visit plantnebraska.org and click the "Resources & Events" tab at the top. On each of the Resources pages, look for handouts marked "NEW!"

Make a Difference for Monarchs

Monarch populations are decreasing. Here's how you can help.

You're not imagining it. There are fewer monarch butterflies in our gardens, backyards, parks and neighborhoods this summer and fall. A lot fewer.

In February, the World Wildlife Fund reported that eastern migratory monarch butterfly populations decreased by 59% during the 2023-2024 winter season. Monarchs had previously occupied 5.5 acres in their central Mexico forest wintering spot, while this year they occupied just 2.2 acres. The annual survey is considered a benchmark indicating the overall health and abundance of the species.

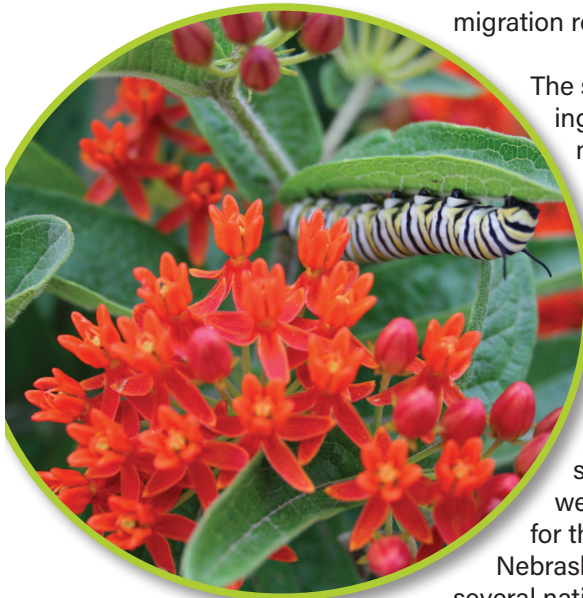


Scientists attribute the decline to climate change and increased herbicide use along the monarchs' migration routes, which cover 3,000 miles from southern Canada through the northern and central U.S. to their overwintering sites in the mountain forests of central Mexico. High temperatures and drought last summer and fall reduced the amount of milkweed, which is the only plant monarch larvae feed on, and other nectar-producing plants, which sustain the insects along their migration routes.

The situation is alarming, but the good news is, you can take some small but impactful steps to help monarchs. Here are some suggestions:

Plant milkweed.

Monarch larvae subsist on milkweed alone. Lucky for those of us in Nebraska, we have several native varieties readily available including: swamp milkweed (*Asclepias incarnata*), common milkweed (*Asclepias syriaca*) and butterfly milkweed (*Asclepias tuberosa*).



Plant native perennials to provide nectar. Monarchs need nectar for energy as they breed and to sustain them along their migratory journey. Try gayfeather (*Liatris*), coneflower (*Echinacea*), goldenrod (*Solidago*), aster, hyssop (*Agastache*) and Joe Pye plant (*Eutrochium*). Aim for both mid-to-late summer and fall-blooming perennials to provide nectar sources for monarchs during their entire migratory season. Fall is a great time to put perennials in the ground, so it's not too late to get a jump-start on next spring's breeding and migration seasons.

Create a mini pollinator corridor. Even a small group of pollinator plants can help to create a pathway that connects with other gardens in your neighborhood. Reach out to city and park officials to encourage them to do the same.

Stop spraying for mosquitoes. And reduce the use of pesticides and herbicides, which can kill beneficial insects like bees, caterpillars and butterflies.

Be an advocate.

Join and donate to conservation groups. Educate yourself and then pick up the phone or send an email to let your community leaders and officials know about the importance of monarchs and other pollinators.



Become a citizen scientist.

Research opportunities in your area to participate in collecting data about monarch butterflies and other pollinating insects. Using iNaturalist, PlantNet and other citizen science apps is a great way to get started.

Don't give up hope! It's not too late to halt the rapid decrease in monarch numbers and ultimately reverse the trend. Every small action step contributes to making a big difference.

Feature Tree

Black Cherry

Black cherry (*Prunus serotina*), is a lesser-known native deciduous tree that grows to 50-60 feet tall and offers pendulous, showy white flowers in the spring, followed by dark, pea-sized fruit in late summer and warm, golden-colored leaves in autumn.

This widespread species is the largest and most important native cherry. It gets its common name from the fact that its bark and crushed foliage emit a cherry-like scent, which comes from a toxic compound called amygdalin. While the fruit can be eaten raw or made into jellies and syrups, the rest of the tree parts are toxic and can be fatal when consumed.

Black cherry prefers full sun to part shade and well-drained soil. It is an important plant for pollinators and is highly valued as a wildlife plant (Ecologist and author Doug Tallamy ranks the genus *Prunus* as the second most important food plant after oak (*Quercus*) trees).

Black cherry serves as larval host for a number of moths and butterflies—including viceroy and eastern tiger swallowtail. More than 40 species of birds eat the fruit, and honey bees, bumble bees and native bees are drawn to its blossoms in the spring.



Save the Date

Mark your calendar—you won't want to miss these events and happenings.
Visit our events page at plantnebraska.org/events for more information.

September

Garden Walks

Lincoln: September 10

Omaha: September 17

5-7:30 p.m.

Visit plantnebraska.org/garden-walks for details.

Fall Plant Sales

Omaha Plant Sale

Saturday, September 7

9 a.m. - 12 noon

Douglas-Sarpy County Extension Office

8015 West Center Rd., Omaha

Lincoln Saturday Plant Sale

Saturday, September 14

9 a.m. - 12 noon

NSA Greenhouses on UNL's East Campus

2150 N. 38th St., Lincoln

Friday Plant Sales

September 13, 20 & 27, October 4 & 11 | 12:30-4:30 p.m.

UNL East Campus Greenhouses

2150 N. 38th St., Lincoln

October

Trees, People & Towns Conference

October 15-17

University of Nebraska East Campus Union, Lincoln

Details and registration at TPT.eventbrite.com.

Plants & Pints—with speaker Jim Locklear

Tuesday, October 22

7-9 p.m.

Glacial Till

1419 Silver St., Ashland

More information at plantnebraska.org/plants-pints.

NSA Awards Reception—Nominations now open

Friday, November 8

2-4 p.m.

First Plymouth Congregational Church

2000 D St., Lincoln

Visit plantnebraska.org/awards for the nomination form.

Westward Bound: Wildflower Week 2024

Hands-on learning takes center stage on this annual trip to the Panhandle.

Wildflower Week is always a highlight of our year, and 2024 was no exception. During the first full week of June, Statewide Arboretum staff traveled to Ogallala, Gering and Scottsbluff to host a variety of events, connect with members and friends and shine the spotlight on western Nebraska's unique and diverse native wildflower species.

"Wildflower Week is a welcome opportunity for us to connect in person with our members, partners and friends in the Panhandle," said NSA Executive Director Hanna Pinneo. "And it's always a treat to see all the different varieties of wildflowers out there and explore the beautiful parks and recreation areas."

NSA kicked off Wildflower Week activities with a guided hike at Cedar Point Biological Station, the University of Nebraska's field research facility and experiential classroom on the edge of the Sandhills in Ogallala. More than 35 intrepid hikers, wildflower guidebooks in hand, explored the rugged landscape, spotting dozens of flora species, including shell-leaved penstemon (*Penstemon grandiflorus*), plains prickly pear (*Opuntia polyacantha*) and cowboy's delight (*Sphaeralcea coccinea*).

Later that afternoon we celebrated the designation of Tri Trails Park in Ogallala as NSA's newest Landscape Steward Affiliate Site and then made our way to Scottsbluff for a lively game of "Tree-via" with members and friends at Papa Moon Vineyard.

The next day we were treated to a gorgeous, cool evening for our guided hike through Wildcat Hills State Recreation Area, where another 25 hikers enjoyed a picture-perfect sunset following a presentation by Stephen Rolfsmeier about his work at the High Plains Herbarium, which houses a collection of more than 60,000 plant specimens at Chadron State College.

We rounded out our jaunt with a plant sale at Gering's Community Ever Green House, which features a unique bioswale and beautiful raised-bed perennial gardens, in addition to its vast vegetable garden, which supplies hundreds of pounds of fresh produce to the community each summer.

We're already looking forward to returning to western Nebraska in June 2025 for another great Wildflower Week!

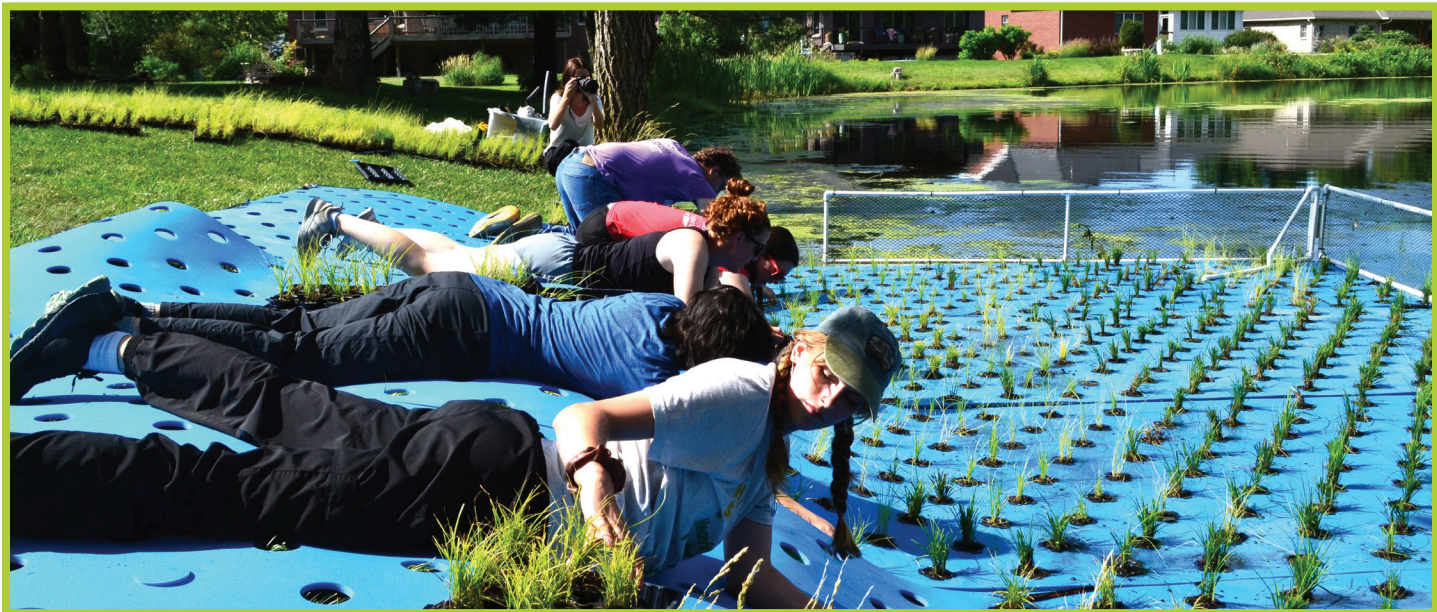


Top: Western Nebraska Community Forester Chrissy Land leads a wildflower hike at Cedar Point Biological Station. Left: Hikers at Wildcat Hills State Recreation Area. Bottom: NSA Executive Director Hanna Pinneo and George Acker commemorate Tri Trails Park in Ogallala as an NSA Landscape Steward Affiliate Site.



NSA Gets Its Feet Wet

The innovative use of sedges is making a difference in the water quality of urban ponds.



Environmental science major Ashleigh McGreer (foreground) and her classmates install a floating wetland in a Lincoln pond.

The Nebraska Statewide Arboretum may be best known for tree planting, garden making and environmental education, but more recently, we've dipped our toes, so to speak, into a new horticultural endeavor: wetlands ecology. NSA is partnering with Dr. Steven Comfort, UNL professor of soil and water chemistry, to provide nearly 10,000 sedges for an innovative project that aims to decrease high levels of nitrogen and phosphorus in urban ponds.

How It Works

A variety of sedges are first replanted into specially designed pots by a crew of NSA volunteers. The sedges are then transported from NSA's greenhouses to an urban pond, where they are snapped into a large foam rubber mat, which is anchored to the bottom of the pond.

The plant roots are suspended in the water, where they absorb nitrogen and phosphorus. Microbes on the plant roots convert nitrate to nitrogen gas, which safely returns to the atmosphere. Too much nitrogen and phosphorus can lead to an overabundance of algae, which can then kill fish and other aquatic species. Over time, the decrease in nitrogen and phosphorus allows oxygen levels in the water to increase, which results in less algae, clearer water and healthier fish.

Calen Pollard, a junior biological systems engineering major, has helped to construct and install three floating wetland structures so far. "It's been very cool to see a project through from start to finish," said Pollard. "I never thought I would do environmental work, but after working on this, I think it's something I could definitely go into."



Biological systems engineering major Calen Pollard (top) and Environmental science major Becca Cain (left) participate in a recent floating wetlands installation in Lincoln.

The floating wetlands are used in combination with a chemical treatment that employs lanthanum, a rare-earth metal, to remove excessive phosphate from nutrient-rich water. Lanthanum binds to phosphates in the water, creating lanthanum phosphate, a form of phosphorus not available for plant growth. The lanthanum is slowly released through a pump installed at the pond's edge, which also adds oxygen to the water.

Patience for the Process

Even with both treatments, the process of transforming a pond from algae-ridden to clear is slow. But the treatments have been shown to work. A floating wetland and lanthanum pump installed by Dr. Comfort and his students in 2020 in the pond near Lincoln's Cooper YMCA dramatically decreased algae in the pond over a three-year period.

"Having the plant source readily available from the Statewide Arboretum is a big asset to the project," said Dr. Comfort, whose students also helped to repot plants in NSA's greenhouses this spring and summer. "It's very convenient for us to have the plants right there on campus."



NSA Horticulture Program Coordinator Bob Henrickson (left) and Dr. Steven Comfort, UNL Professor of Soil and Water Chemistry (right), pot up sedges with (left to right) UNL horticulture graduate Alessandra Meza; who now works as a greenhouse manager at Casa Bovina in Lincoln; visiting Ph.D. student Amanda Araújo, from Brazil; and UNL environmental science graduate Natalie Robbins, who now works for the Nebraska Department of Environment and Energy.

Spotlight on Bessey Nursery

A peek at the oldest seedling nursery managed by the USDA Forest Service

Did you know that the oldest seedling nursery managed by the USDA Forest Service is right in our own backyard? The Charles E. Bessey Nursery near Halsey, named after the University of Nebraska botany professor who envisioned a forest growing in the Sandhills of Nebraska, was established in 1902 and has been growing trees for reforestation, restoration and conservation projects in Nebraska, Colorado, Wyoming, South Dakota and Kansas ever since.

Nursery manager Rich Gilbert recently gave NSA staff a tour of the greenhouses, which are growing an astounding 1.7 million container seedlings (another 1 million bare root seedlings are grown on the property). Bessey Nursery also houses a seed bank that holds 800 different seed lot used for propagation, including 14,000 pounds of conifer seed to protect against natural disasters such as fire and insect destruction.

Some of the results of the Nebraska Forest Service's (NFS) reforestation efforts can be seen near Kilgore, where the McCann fire destroyed over 7,000 acres in 2023. More than 17,000 ponderosa pine seedlings grown at Bessey Nursery were planted by NFS in the aftermath of the fire and are now thriving. With time and a little luck, future generations will enjoy a beautiful forest here again someday.

Top photo: One of the Bessey Nursery greenhouses. Bottom: a baby ponderosa pine, planted in a reforestation project after the 2023 McCann fire.



Get Involved

JOIN US for events, talks, podcasts and plants sales.

BECOME A MEMBER.

We are a nonprofit organization that relies on memberships and donations to make our many programs and resources possible. More information at plantnebraska.org.

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IRA Grant Update

NSA was awarded \$10 million in Inflation Reduction Act (IRA) funds from the USDA last September to complete tree planting, care and removals, as well as forestry workforce development throughout the state over the next five years. The good news is that we recently awarded the first \$300,000 of that funding to small communities in partnership with the Nebraska Forest Service. However, the process has been slower than anticipated as the US Forest Service continues to work on developing the official guidelines, which has delayed approval of our proposed plan of work.

We continue to plan accordingly so that we can move as quickly as possible when our plans are approved. Our hope is that we will have at least one Request for Applications open soon so work can begin in communities this winter. Visit plantnebraska.org/ucf-grants for the latest information and updates.

While things have moved more slowly than we would like, we're still excited about the opportunities this funding will provide in communities across Nebraska. Thank you for your support, encouragement and patience as we seek to implement this historic program.