

IN THE

Garden

Quarterly - Fall 2021



Tulsa Garden Center
at Woodward Park

Kay County Perch Murders

By Laura Chalus, CEO, Tulsa Garden Center at Woodward Park

He reeled it in and took it off the hook while chatting with my mother sitting beside him. Then, without even looking, he nonchalantly tossed the shimmering little fish high into the air and over his shoulder where it cleared the pond dam and went sailing to the ground below with a muffled thump.

The act was just so casual that it took me a few stunned moments to realize what had just happened. Regaining my senses, I slinked down the steep embankment as stealthily as I could and quickly found the little guy lying in the hot summer sun, its eyes staring into nothingness while its gills flexed spasmodically. Concentrating so it didn't slip out of my hands, I managed to pick it up and scuttled over to the smaller, adjacent pond, washing him off the best I could, before letting it go.

As I stood there watching it swim away and wondering why my grandfather had done it, lo and behold another fish came flying through the air with a poof of dust as it landed. I was only able to save a few more souls before my subterfuge was discovered and I was chastised. Even after I was told that the unwanted perch were a nuisance fish, crowding out the other fish and eating all of their food, it still didn't sit right with me.

Growing up in a hunting and gardening family, I learned early in life that things were killed bloody, or pulled from the ground for us to eat, and I was A-Okay with that fact, especially when I was asking my grandmother for a second helping of fried squirrel with mashed potatoes and gravy! But in this case I still had so many unanswered questions. How did the perch get there? Why were there so many? And more importantly, can I crawl into the pond to investigate??!

Any ecosystem is only as healthy as its indicator species, which is to say a species which can be used to infer conditions in a particular habitat. The indicator species is an organism whose presence, absence, or abundance

reflects a specific environmental condition. It can signal a change in the biological condition of a particular ecosystem, and thus may be used as a proxy to diagnose its overall health. For my grandfather's ponds in Kay County, Oklahoma, the perch had taken over and upset the habitat's normal healthy balance, so my grandfather was simply performing habitat restoration I suppose, my sensibilities and the unlucky fish notwithstanding.

In Woodward Park, it is the people who serve as our habitat's indicator species, with the breadth of people's differences serving as a measure of our ecosystem's





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at Woodward Park

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Family Fishing Expedition—c.1972

overall health. Making sure we have a diverse mix of people with varying viewpoints, life experiences, cultures, and backgrounds is the right kind of goal if you are looking for a healthy environment. Tip those scales too

much in any one direction and you might just end up losing the natural balance leaving everyone floundering in the dirt...

Fall Newsletter –September, October, November 2021

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Growing the Next Generation

By Laura Chalus, CEO, Tulsa Garden Center at Woodward Park

Woodward Park has a magical way of helping people discover who they are and where they were meant to be, and the Tulsa Garden Center's new director of horticulture, Mr. Andy Fusco, is no exception.

In 2017, while he was in search of a summer internship, Andy was referred to the Linnaeus Teaching Garden program by one of his Tulsa Community College horticultural instructors, Cherlyn Reeves. Having served as a Linnaeus summer intern herself, and one of the program's many advocates, Cherlyn, unbeknownst to her, had just given Andy some of the best career advice he might ever receive.

Andy grew up in a gardening family, but it wasn't until that summer he spent in Woodward Park, learning under the tutelage of Barry Fugatt, did the bug of public garden management take a bite. Being a film studies graduate, Andy had worked on some very exciting and fast-paced projects, including The Pioneer Woman Food Network show, the Super Size Me movie, and even a Michigan-based reality show, but it was the calming inspiration of Woodward Park which brought clarity to his future plans.

Self-labeled as a bonafide plant geek, Andy fell in love with the thought of coming to a beautiful place every day and being able to connect people with plants, and then there were the volunteers!



Andy Fusco and Barry Fugatt.

Andy had participated in the Tulsa Area United Way's annual Day of Caring events, so he was familiar and comfortable with volunteerism, but he had never realized that there were volunteers out there who were willing to dedicate so many hours to something they loved, while wanting to share their passion with the public as well. He knew he had found his calling.

As his Woodward Park family has watched Andy progress through an impressive education, we have been particularly impressed with his use of native Oklahoma wildflowers,

and we think you will be too. To that end, we have included an Oklahoma Cooperative Extension Service "Fact Sheet" which Andy coauthored with Lou Anella, director of The Botanic Garden at OSU, and which we hope will inspire you to plan a more sustainable landscape for your own yard.

Serendipity may have brought Andy back to Woodward Park, but the people he works alongside will be the reason he stays. Please join us in welcoming Andy Fusco to Woodward Park!

Aquatic Nuisance Species



Have you ever heard of Watermilfoil, Hydrilla, Didymo, Golden Algae, or Zebra Mussels?

These and many other flora and fauna that move in and change the ecosystem of our lakes have been dubbed by biologists as aquatic nuisance species or ANS. Most ANS are not indigenous to Oklahoma.

Because they are aggressive reproducers with few, if any, local predators to keep them in check, ANS quickly get established, dominate, and change their environment. As ANS spread they often out-compete native species or devour food sources at such a rate that native species cannot survive. The new "monoculture" that results can drastically change the chemistry and the biological diversity of a waterbody.

Once ANS get into a lake or stream, it may be impossible to remove them entirely. Furthermore, any attempt to completely eradicate or control ANS will likely result in harming native species as well.

Zebra mussels, one of the most prominent ANS in our state, currently inhabit several stream systems in Oklahoma. This invader is continuing to spread with new infestations being found annually. These tiny mussels have the potential to reduce the productivity of infested systems and cause economic loss by clogging pipelines, locks and dams, marinas, and even outboard motors.

Bighead carp have been found in the Neosho River, Red River, and Grand Lake. Although reproduction has not been verified in Oklahoma, this species has caused major economic and recreational losses in the upper Mississippi River system.

The primary danger associated with aquatic nuisance species is the potential to disrupt the balance of our lakes.

Golden Algae, which is responsible for fish kills that have completely decimated fisheries in several Texas reservoirs, appears to be migrating north. Golden Algae is attributed to a number of fish kills in both the Red River and Lake Texoma.

Invasive plants often are moved from one system to another by boaters failing to remove plants, such as Eurasian watermilfoil and hydrilla, from trailers. Because combating ANS is so difficult, the best current strategy is to avoid further contamination by ANS altogether through public awareness and participation. It is crucial that Oklahoma's boaters, fishermen, and other outdoor recreationalists understand the importance of cleaning boats, waders, or any water gear that may be contaminated with fragments or seeds.

The Department of Wildlife Conservation has been assigned to lead the fight on this issue. You may learn more about these species from the ODWC website:

www.wildlifedepartment.com/nuisancespecies.htm, or call 405.521.4623.

The economic costs of aquatic nuisance species to the United States in 2000 were estimated at \$137 billion.



Common Aquatic Nuisance Species in Oklahoma



ZEBRA MUSSELS: are small thumbnail sized mussels with striped patterning on their shells. The mussels attach to structures forming dense colonies reaching hundreds of thousands per square meter! A single female mussel can release up to one million eggs per season. Zebra mussels in large numbers reduce the availability of plankton and cause major economic loss clogging pipelines, locks, dams and boat motors. A general practice of washing your boat and equipment and allowing them to dry for several days is recommended.



WHITE PERCH: as top competitors, they can quickly become the dominant species in freshwater lakes and are associated with declines in both walleye and white bass populations. White perch have been migrating throughout the Arkansas River Basin and are currently established in Kaw, Keystone, and Sooner Lakes.



HYDRILLA: an aquatic plant rooted usually in the shallow portions of the lake, often becoming visible once it tops out above the water line. It has a long stem with whorled leaves. It can spread by seeds or simply small fragments that quickly take root. Hydrilla has been named the most damaging aquatic weed in the U.S. It has the ability to become densely established and outcompete native plant communities. Hydrilla is currently found in Arbuckle, Murray, and Sooner Lakes.



EURASIAN WATERMILFOIL: a perennial evergreen that is distinguished from hydrilla by its flat leaves floating around a stem. A single fragment can become established in a lake bed and grow several inches per week. It will rapidly take over large areas of the lake's *littoral zone* (shallow lake shoreline). This zone is where a diverse native plant community is essential to the health of a lake's ecosystem.



DIDYMO: commonly called "rock snot", is an invasive algae that attaches to rocks and plants in streams and rivers. It can completely smother gravel and rocks, reducing the available spawning and feeding habitat for fish and other organisms. Over time, it can form mats so dense that they are no longer fishable. Didymo is currently established in the Lower Mountain Fork River. After visiting this river be sure to wash your waders with a 2% bleach solution or dishwashing detergent.



BIGHEAD CARP: first documented in Grand and Hudson lakes almost 15 years ago. They have been recently sighted in the Kiamichi River below Hugo Reservoir, making their presence likely in the Red River. Native to Asia, these fish deplete zooplankton populations, leading to reductions in native fish populations, impacting both commercial and recreational fishing.



GOLDEN ALGAE: a tiny yellow-green single-celled organism that releases toxins to gill-breathing organisms (such as fish and mussels) as it rapidly reproduces into blooms. It has reportedly killed 7.6 million fish in Texas lakes and rivers since 1985. It has been documented to be working its populations into southern Oklahoma. It currently prefers the more saline waters found near the Red River basin at this time.



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The Wonders of Wildflower Gardening

By Andy Fusco, Director of Horticulture, Tulsa Garden Center at Woodward Park

There's a common saying that goes something like "do what you love and you'll never work a day in your life." The originator of this phrase surely was not a gardener. Don't get me wrong, I love horticulture and I feel blessed every day that I get to garden for a living. But, when the heat index is in the triple digits and even the toughest of plants look a little worse for wear, it takes a lot of

WORK to keep things alive through the dog days of summer. Water, deadhead, prune, water again, pull weeds, and water some more, ad infinitum. It's hot, sweaty work and I never have trouble sleeping after a long day in the garden.

It is no wonder, then, that tougher plants and less demanding landscapes are hot commodities in

gardening these days. Most people want to relax and enjoy the beautiful outdoors without having to add one more thing to the to-do lists that manage our busy lives. On top of this, news that the environment will only continue to get hotter and drier have many of us asking, "what can we do different?"

Last fall, as I contemplated what to





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The Wonders of Wildflower Gardening continued

do with a 6,000 square foot bed at Tulsa Botanic Garden I asked myself these same questions. This bed is the first thing people see when they step out onto the deck of the Visitor Center so it of course had to be beautiful. But, it would also require a large amount of labor and resources to plant and maintain if I used traditional bedding plants and tropicals (this area has no built-in irrigation).

My answer to this dilemma was obvious in retrospect—wildflowers. While in graduate school at OSU, I studied wildflower gardens for Oklahoma’s climate. I first became interested in them for purely aesthetic reasons. A wildflower garden in full bloom is absolute magic. The multitude of shapes, colors, and textures dancing in the wind is breathtaking. To me, these gardens harmonize perfectly the wildness of the natural world with cultivated gardens and manicured landscapes. As I dug into the subject further, my love only grew because not only are wildflower gardens beautiful, but they’re also fairly simple to execute no matter the scale of the garden.

Wildflowers are less labor intensive for the same reasons they are more environmentally friendly than traditional gardens. Wildflowers, as suggested by their name, can grow in the wild, that is, without human interference. They will survive with little additional water, soil amendments, or fertilizer. Once established, they shade out most weeds and require very little attention except for our admiration. And so it was decided, a wildflower meadow was coming to the heart of Tulsa Botanic Garden.

For this display, I created a mix that was mostly annual species so that everything was sure to bloom this season. I also chose species that bloomed at different times so that something was always in bloom even when others had faded away. Once the seeds were sown, Mother Nature did most of the work. I had to water only when the spring rains were insufficient and this year, that was not often. The blue bonnets, snapdragons, and poppies bloomed first followed by the tickseed and blanket flower, and the cosmos will finish out the show, blooming until the first frost.

Overall, the display these wildflowers put on was better



than even I could have imagined. Each day it morphed and grew and provided a different perspective from the day before. Countless bees and butterflies visited, hopping from flower to flower, to get their day’s fill. As the cosmos matured and went to seed, the golden finches joined in the feast. It seemed nature was enjoying the display as much as the people were.

As the season winds down and we start dreaming of next spring, consider adding wildflowers to your garden, whether it’s a small patch of zinnias on your patio or a perennial meadow in that neglected corner of your backyard. Come August, you’ll certainly be glad you did.



Wildflower Gardening in Oklahoma

EXTENSION

December 2020

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Oklahoma Cooperative Extension Fact Sheets
are also available on our website at:
extension.okstate.edu

Introduction

Wildflower gardens can be pleasing to the eye for many gardeners. These landscapes bring the natural world into the human context of gardens and landscapes. Recreating this beauty in a public garden or in a backyard can improve personal and public well being.

In many ways, wildflower gardens are more environmentally friendly than traditional gardens. Although most plants will survive for a time in any given environment without human interference, they will need the right conditions to perform in the desired way (many flowers, growth habit, height, etc.) When the environmental conditions are not ideal, such as poor soil fertility, fertilizers or other amendments are needed. Once established, wildflowers will meet the desired aesthetic more easily because the plants are accustomed to the soils and growing conditions of the local climate. They will survive with little additional water during the growing season, few soil amendments and little to no fertilizer depending on the chosen site.

A wildflower garden can be a pleasing addition to any garden in Oklahoma provided the right steps are taken in its establishment.



Photo by Gathering Place Horticulture Team/Shane Bevel Photography

Site Selection and Preparation

Selecting a site is one of the most important decisions to make when creating a new wildflower garden. Almost any site, no matter how large or small, can become a wildflower garden, but consideration of certain factors will determine the long-term success of a new garden. When selecting a site, pay close attention to things like sun and wind exposure, drainage (where water pools, drains quickly or runs off, etc.), site topography (hilly, flat, depressed, etc.), site access for maintenance, available irrigation (if needed), existing vegetation (native or not) and the new garden's place within the overall garden or site. These conditions will dictate which species to plant because a successful wildflower garden resembles the natural habitats of native plants as close as possible.

If there are multiple options for sites, the desired plant species or aesthetic can dictate where a wildflower garden should be located. Oklahoma is a diverse state with many different types of ecological regions. There are multitudes of worthy wildflowers that do well in shady spots, full sun, dry, arid regions, wetlands and anywhere in between. Choose a site that will best support the desired plant community without the need for a total overhaul of the site's natural composition.

Almost any garden site will have existing vegetation and, more often than not, this vegetation will consist of aggressive, weedy species that thrive in neglected areas. Eliminating or at least greatly reducing these weeds before planting will save a lot of time and hassle in the long run. There are many ways to accomplish this, but all of them require some preplanning. It can take anywhere from a few weeks to several growing seasons to eliminate weeds in an area. Even once the established weeds, grasses and other plants are removed, there will still be a rich and diverse seed bank within the soil. This collection of seeds can remain dormant for years, only to germinate once the weedy competition is eliminated or the soil disturbed.

Non-selective post-emergent herbicides (i.e. glyphosate) are an effective way to kill perennial weedy plants growing in a chosen area (Figure 1). Multiple treatments may be needed and they should be spaced out every few weeks as new weeds germinate. If time permits, repeated sprayings during an entire growing season also will reduce those cool-season weeds that germinate in the cooler temperatures of spring and fall.

Solarizing or smothering is another way to get rid of the existing vegetation on a site as long as the existing vegeta-



Figure 1. Non-selective post-emergent herbicides are an effective way to kill perennial grasses covering a garden site. Multiple treatments may be needed.

tion is of manageable size. Solarizing is accomplished using clear plastic sheeting and the sun's heat to effectively cook the plants and seeds. The heat of solarizing soil also can reduce the amount of viable weed seeds, but will not totally eliminate them. Smothering by utilizing black plastic or another opaque material blocks sunlight and stops photosynthesis, thereby killing plants.

In addition to these methods, tilling also is an option, although it is not always the most reliable method. Tilling will kill and aid in the removal of some perennial weeds that have stubborn root systems (Figure 2), but it can effectively multiply others by dividing rhizomes and other plant parts that serve as propagules for new plants. Tilling also will kick up dormant seeds below the soil surface. For this reason, a shallow tilling depth will help keep deeper seeds dormant, but this is not guaranteed (Figure 3).

After tilling, the area should be left relatively undisturbed for enough time to see new weed growth and then retreated with herbicide to kill any weeds that have sprouted. Repeating this process multiple times should exhaust the weed seed bank of the site. If time permits (as in preparing a site during



Figure 2. Tilling can aid in the removal of some perennial grasses and weeds.



Figure 3. A shallow tilling depth will help keep deeper seeds dormant.

a growing season or longer), till the site multiple times. This will bring up more weed seeds that will germinate and then can be killed.

Soil amendments are typically not needed for wildflower gardens because the species planted are largely adapted to poor soil conditions. Luxury conditions tend to favor lush growth in wildflowers, often resulting in plants that flop over. If a large portion of the top soil has been removed or other soil problems are suspected, please consult a local Extension office for soil testing and amendment recommendations.

Species Selection

The conditions of your garden's site will dictate which species will thrive in your wildflower garden. Thankfully, many seed companies list recommended conditions for each species in their catalogues. See page five for a list of popular Oklahoma wildflower species.

Another strategy for selecting suitable species is to simply observe and study a natural area with similar conditions to your specific garden site. What species grow in this natural area? Is there a mixture of grasses and forbs? Are there woody shrubs and trees with low-growing underbrush? Nature can be the best inspiration when designing a beautiful wildflower garden.

Whether the goal is a prairie restoration, uniform color, a mosaic of colors and textures, a windbreak or an attractive privacy screen, always go back to the desired aesthetic. These are things to think about when choosing species for a native garden. When all else fails, choose a seed mix that has already been tried and tested for your region. Most nurseries specializing in native plants and wildflowers have multiple mixes for all types of aesthetic and cultural conditions. Seed mixes can be a great choice for a small space in a yard or for someone that wants to try out this type of gardening without a large investment.

When to Plant

When planting a wildflower garden with seed, seed dormancy must be understood. Many native species have evolved only to germinate when conditions are most advanta-

geous, such as after a fire or a heavy rain event. Most commonly, seeds need a cold and wet period to break dormancy (stratification). This dormancy can be artificially broken by placing seeds in a moist growing medium in a refrigerator for a specific period depending on the species, usually four weeks to eight weeks. Some seed companies will sell seeds that have already been put through this process but many companies do not because untreated seeds have a longer shelf life. In Oklahoma, it is highly recommended planting be done in the late fall to ensure the seeds go through a natural stratification or other dormancy breaking process. In areas that receive more snowfall, a post-frost/snowfall planting can be done. Fall planting also is beneficial because it will not hinder more pressing garden tasks in the spring.

If planting in the fall on a sloped but barren area, a cover crop of a non-weedy, cold-season species is recommended. This will mitigate erosion of the site while seeds remain dormant and will keep seeds from washing away. With time, this cover crop will die out or be outcompeted by the planted species. Common cover crops are oats (*Avena sativa*) and winter wheat (*Triticum*).

Additionally, if planting pre-established plants, such as plugs or container-grown specimens, planting should be done in early spring after the danger of frost. Many perennial species perform best after a full growing season to establish and survive the following winter.

Sowing Seed

Successful seed sowing will lead to a full garden with a balance of the species selected represented through the garden. A few simple steps can ensure an even distribution of seeds over a large area:

1. Separate the area to be planted into a few equal parts. Each can be sown by one or two people without much overlap so certain areas aren't easily missed (Figure 4).
2. Combine all of the seeds in an appropriate container and mix them.
3. Divide the mix into equal parts—the same number of parts as the garden is divided.
4. Add moistened filler material to each section of seed. Good filler materials are sawdust, compost, peat moss, sand or rice hulls. Whichever filler material is chosen, it should be lightweight enough to be easily spread and carried around the garden without much effort.
5. Add three parts filler material for each part or section of seed mix to create a broadcast mix.
6. Broadcast this mix evenly over each area (Figure 5).
7. Lightly tamp the seed with your feet or other tools to ensure good seed-soil contact without burying the seed too deeply.

Maintenance

Wildflower gardens are not set it and forget it efforts. Once seeds are planted, it's mostly a waiting game until spring, but keep an eye out for cool-season weeds and remove them as necessary. Once the garden starts growing, it will need no less maintenance than a normal garden while it establishes during the first three growing seasons.

The first growing season will be the most labor-intensive. If the steps listed above are followed, you will greatly reduce the amount of work required in subsequent years. Weeds will



Figure 4. Separate the area to be planted into a few equal parts. Each can be sown by one or two people without much overlap so certain areas aren't easily missed.



Figure 5. Broadcast seed mix by hand over the garden area.

come up, as they do, in any garden. Hand-pulling weeds is not recommended as fragile young root systems of adjacent seedlings can be damaged. If an infestation of a serious noxious weed establishes, pulling may be the only option but gentle care must be taken. For many weeds, mowing will keep them under control. When the seedlings reach a height of 8 inches to 10 inches, mow the garden down to a height of 4 inches to 5 inches or the tallest setting on most push mowers. Although this may sacrifice some blooms, it won't hurt the plants and will actually contribute to a richer garden in the long run. Mowing at this height prevents weeds from shading out new seedlings and helps remove flowers and seed heads of weed species. Leave the clippings and debris in place, as they will add organic matter to the soil and act as a mulch. Be careful not to leave any mature weed seed heads after mowing. Spot-spraying of herbicides when wind conditions are calm should only be used as a last resort on especially tough weed species.

In the second growing season, the garden plot should be more mature and abundant with desired species. If there are large amounts of weeds still present at the beginning of the season, mow the plot to a height of 6-12 inches. If certain species did not sprout in the first season, their seeds may not have broken dormancy and may sprout this year. If there are desirable species that simply never emerge, reseed the area with these missing species. Annual species that may not have set enough seed in the first year to become properly established need to be reseeded. Unless there are major problems in the previously outlined process, the second season will be the first productive year for the garden with many plants being mature and healthy, creating the beautiful wildflower garden you are seeking.

After the second growing season, your garden will continue to mature and establish and it should reach an equilibrium. Continue to watch for troublesome weeds and remove them as necessary. The established wildflowers should be healthy enough to withstand soil disturbance around their roots. Reseed any annual species if they are not properly abundant by year three. You can create a management practice within the garden to encourage these annuals to reproduce on their own. One of the most highly recommended management principles for a wildflower garden, especially for Oklahoma prairie species, is to employ prescribed burning after three years to four years of establishment. Burning removes the thatch layer that builds up. This thatch layer can smother young plants. Burning every year yields more flowers and healthier plants, but after five years to seven years of prescribed burns, it is recommended either to burn only every three years or to burn sections of the garden on a three-year rotation.

Burning is not always an option, especially in urban and residential areas. Many public gardens, parks and most nature reserves or forests recognize the importance of fire as a tool used in maintaining healthy ecosystems but local laws often preclude its use. Instead, annual mowing in the early spring and raking and removal of dead debris can reduce the thatch layer. Always refer to local authorities for specific burning restrictions.

The maintenance regime will depend on the overall aesthetic and purpose of the garden. Wildflower gardens can look unkempt in the winter (Figure 6) and therefore, may need to be maintained in a way to improve their aesthetics, despite the recommended cultural guidelines. Also, some municipalities have ordinances regarding vegetation height and maintenance.



Figure 6. Wildflower gardens can look unkempt in the winter.



Figure 7. Some municipalities have ordinances regarding vegetation height and maintenance. Be aware of these restrictions before creating a garden.

Be aware of these restrictions before creating your garden (Figure 7).

Conclusion

Although not a new concept, wildflower gardens are gaining in popularity among gardeners seeking ways to enhance native ecosystems in urban areas while also seeking to reduce the resources needed to keep their gardens beautiful. Wildflowers present opportunities to bring a part of Oklahoma's natural heritage into the backyard and, through each gardener's individual interests, demonstrate the diversity of the Oklahoma flora.

Oklahoma Native Wildflowers*

Amsonia illustris—shining bluestar
Amsonia hubrichtii—Arkansas bluestar
Aquilegia canadensis—eastern columbine
Arnoglossum plantagineum—Indian plantain
Asclepias spp.—There are more than 20 native milkweed species. See *Native Milkweeds of Oklahoma* in the references section for more information.
Astragalus crassicaarpus—ground plum
Baptisia alba—white wild indigo
Baptisia australis—blue false indigo
Baptisia sphaerocarpa—yellow wild indigo
Callirhoe bushii—Bush's poppy mallow
Callirhoe involucrate—purple poppy mallow
Camassia scilloides—wild hyacinth
Coreopsis palmata—prairie coreopsis
Dalea candida—white prairie clover
Dalea purpurea—purple prairie clover
Echinacea pallida—pale coneflower
Echinacea paradoxa—yellow coneflower
Echinacea purpurea—purple coneflower
Eryngium leavenworthii—Leavenworth's eryngo
Eryngium yuccifolium—rattlesnake master
Euphorbia corollata—flowering spurge
Euphorbia cyathophora—fire-on-the-mountain
Euphorbia marginata—snow-on-the-mountain
Eutrochium purpureum (syn. *Eupatorium purpureum*)—sweet Joe Pye weed
Gaillardia pulchella—Indian blanket
Helianthus maximiliani—Maximilian's sunflower
Heliosis helianthoides—oxeye sunflower
Liatris pycnostachya—prairie blazing star
Lilium michiganense—Michigan lily
Oenothera gaura (syn. *Gaura biennis*)—biennial beeblossom
Pediomelum tenuiflorum (syn. *Psoraleidum tenuiflorum*)—slenderleaf scurfpea
Rudbeckia gigantea—large coneflower
Rudbeckia maxima—giant coneflower
Rudbeckia subtomentosa—sweet black-eyed Susan
Rudbeckia triloba—brown-eyed Susan
Salvia azurea—blue sage
Silphium laciniatum—compass plant
Spigelia marilandica—Indian pink
Symphyotrichum novae-angliae—New England aster
Tradescantia bracteata—prairie spiderwort

*This list is not a full representation of the native flora in Oklahoma, but a collection of popular, successful plants

used in gardens across the state. The environmental conditions of a specific site will determine whether certain species are appropriate. See the "Species Selection" section of this publication for further information.

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Tulsa Botanic Garden, Tulsa, OK
Gathering Place, Tulsa, OK
Unless otherwise stated, photography by Louis Anella, PhD or Andy Fusco

Plant and Seed Sources

Native American Seed—Junction, TX, 1-800-728-4043, info@seedsource.com, <http://www.seedsource.com>
Pine Ridge Gardens, London, AR, (479) 293-4359, office@pineridgegardens.com, <http://www.pineridgegardens.com>
Prairie Moon Nursery, Winona, MN, (866) 417-8156, info@prairiemoon.com, <http://www.prairiemoon.com>
Prairie Wind Nursery, Norman, OK, (405) 579-8846, <http://www.prairiewindnursery.com>
Wild Things Nursery, Shawnee, OK, (405) 255-1707, marilyn@wildthingsnursery.com, <http://www.wildthingsnursery.com>

Societies & Organizations

The Kerr Center for Sustainable Agriculture, Poteau, OK, (918) 647-9123, mailbox@kerrcenter.com, <http://www.kerrcenter.com>
The Nature Conservancy, Tulsa, OK, (918) 585-1117, <http://www.nature.org>
Oklahoma Native Plant Society, Tulsa, OK, onpsinfo@gmail.com, <http://www.oknativeplants.org>

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Benefits *of* Membership

Reasons why it pays to be a member:

Subscription to the quarterly Tulsa Garden Center E-Newsletter: *In The Garden*.

Free or Discounted Admission to American Horticultural Society Reciprocal Gardens (ahsgardening.org): FREE admission to Myriad Botanic Garden in OKC, Dallas Arboretum and Botanical Garden, and hundreds more!

Discounts on Tulsa Garden Center Programs and Events: A Tulsa Garden Center member would save nearly \$150 on the Native Plant Certification Program and \$25 a ticket on our gala fundraiser, *An Evening of Wine and Roses*.

Invitations to Special Members-Only Events

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Become a member or gift one to a friend at:
tulsagardencenter.org/join

CLASSES AND EVENTS

▶ THURSDAY, SEPTEMBER 2

Tulsa Area Daylily Society monthly meeting. 6:30 pm. Speaker is Missouri hybridizer Patti Waterman who will talk about her Daylily breeding program.

Cacti and Succulent Society of Tulsa monthly meeting. 7:00 pm.

▶ TUESDAY, SEPTEMBER 7

Tulsa Herb Society member activities. 9:00-11:30 am.

Let's Talk Gardening! 12:00-1:30 pm.

▶ SUNDAY, SEPTEMBER 12

Tulsa Orchid Society meeting. 1:30 pm.

Tulsa Rose Society meeting. 2:00 pm.

▶ MONDAY, SEPTEMBER 13

Oklahoma Native Plant Society Quarterly Meeting. 6:30 pm.

Green Country Bonsai Society meeting. 7:00 pm.

▶ TUESDAY, SEPTEMBER 14

Tulsa Herb Society monthly meeting. 10:00 am.

Let's Talk Gardening! 12:00-1:30 pm.

Green Country Water Garden Society meeting. 6:30 pm. Meet at 6:30 for socializing and the speaker's presentation will begin at 7:00 pm. Greg McCann will be speaking on the physical, mental, emotional, and spiritual benefits of owning and maintaining a water feature.

Hosta Connection meeting. 7:00 pm.

▶ THURSDAY, SEPTEMBER 16

Tulsa Perennial Club meeting. 7:00 pm (via Zoom)

Tulsa Area Iris Society meeting. 7:00 pm, Annual Meeting

▶ SATURDAY, SEPTEMBER 18

Cacti and Succulent Society of Tulsa Society Fall Sale. Public Hours: 9:00 am-3:00 pm.

Area Iris Society Sale. Public Hours: 9:00 am-3:00 pm.

Hosta Connection and Pollinator Plant sale. Public Hours: 9:00 am-2:00 pm.



▶ SUNDAY, SEPTEMBER 19

Cacti and Succulent Society of Tulsa Society Fall Sale. Public Hours: 9:00 am-3:00 pm.

▶ MONDAY, SEPTEMBER 20

Oklahoma Mycology Society meeting. 6:00 pm.

African Violet Society of Greater Tulsa meeting. 7:00 pm

▶ TUESDAY, SEPTEMBER 21

Tulsa Herb Society member activities. 9:00 am-11:30 am.

Let's Talk Gardening! 12:00-1:30 pm.

Tulsa Area Azalea Society meeting. 6:00 pm.

Tulsa Audubon Society meeting. 7:00 pm.

▶ FRIDAY, SEPTEMBER 24

A Return to Wine and Roses, a garden gala fundraising event for Tulsa Garden Center.

**Friday, September 24
7:00 pm-9:30 pm**

***Tickets must be purchased in advance.
tulsgardencenters.org/wine-and-roses**

▶ TUESDAY, SEPTEMBER 28

Tulsa Herb Society member activities. 9:00 am-11:30 am.

Let's Talk Gardening! 12:00-1:30 pm.

▶ THURSDAY, SEPTEMBER 30

Green County Sierra Club meeting. 6:00 pm. 6:00 pm-social networking, 6:30 pm-work session, 7:00 pm-speaker.

▶ SATURDAY, OCTOBER 2

African Violet Society of Greater Tulsa Fall Sale. Public Hours: 9:00 am-3:00 pm.

▶ MONDAY, OCTOBER 4

Tulsa Garden Club meeting with a tour of the historic Tulsa Rose Garden.

**Monday, October 4
10:00 am.**

Green Country Bonsai Society meeting. 7:00 pm.

▶ TUESDAY, OCTOBER 5

Tulsa Herb Society member activities. 9:00-11:30 am.

Let's Talk Gardening! 12:00-1:30 pm.

▶ THURSDAY, OCTOBER 7

Tulsa Area Daylily Society meeting. 7:00 pm. Speaker is KRMG Gardening Show Host, Alan Storjohann.

Tulsa Cacti & Succulent Society meeting. 7:00 pm.

African Violet Society of Greater Tulsa monthly meeting. 7:15 pm.

▶ SATURDAY, OCTOBER 9

Tulsa Rose Society Fall Show. Public Hours: 10:00 am-3:00 pm.



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CLASSES AND EVENTS *continued From page 19*

▶ SUNDAY, OCTOBER 10

Tulsa Orchid Society meeting. 1:30 pm.

▶ TUESDAY, OCTOBER 12

Tulsa Herb Society monthly meeting.
10:00 am.

Let's Talk Gardening!
12:00–1:30 pm.

Hosta Connection meeting. 7:00 pm.

Green Country Water Garden Society meeting. 6:30 pm. Halloween party and barbecue.

▶ MONDAY, OCTOBER 18

Oklahoma Mycology Society meeting.
6:00 pm.

African Violet Society of Greater Tulsa meeting. 7:00 pm

▶ TUESDAY, OCTOBER 19

Tulsa Herb Society member activities.
9:00 am–11:30 am.

Let's Talk Gardening! 12:00–1:30 pm.

Tulsa Area Azalea Society meeting. 6:00 pm.

Tulsa Audubon Society meeting. 7:00 pm.

▶ THURSDAY, OCTOBER 21

Tulsa Perennial Club meeting. 7:00 pm (via Zoom.) Speaker is Marilyn Stewart "Perennials for Pollinators."

Tulsa Area Iris Society meeting. 7:00 pm. Speaker is Thomas Johnson of Mid-America Gardens in Oregon, one of the most highly regarded international iris hybridizers in the world.

▶ TUESDAY, OCTOBER 26

Tulsa Herb Society monthly meeting.
10:00 am.

Let's Talk Gardening!
12:00–1:30 pm.



▶ THURSDAY, OCTOBER 28

Green Country Sierra Club meeting. 6:00 pm.
6:00 pm–social networking, 6:30 pm–work session, 7:00 pm–speaker.

▶ MONDAY, NOVEMBER 1

Tulsa Garden Club meeting with a Holiday Arranging demonstration. 10:00 am.

Green Country Bonsai Society meeting.
7:00 pm.



▶ TUESDAY, NOVEMBER 2

Tulsa Herb Society monthly meeting.
10:00 am.

Let's Talk Gardening!
12:00–1:30 pm.

▶ THURSDAY, NOVEMBER 4

Tulsa Area Daylily Society meeting. 7:00 pm. Members will present up to five of their favorite Daylily photos from the 2020 bloom season.

Tulsa Cacti & Succulent Society meeting.
7:00 pm.

▶ TUESDAY, NOVEMBER 9

Tulsa Herb Society monthly meeting.
10:00 am.

Let's Talk Gardening!
12:00–1:30 pm.

Green Country Water Garden Society meeting. 6:30 pm. Election of officers and business meeting.

Hosta Connection meeting. 7:00 pm.

▶ SUNDAY, SEPTEMBER 12

Tulsa Orchid Society meeting. 1:30 pm.
Tulsa Rose Society meeting. 2:00 pm.

▶ MONDAY, NOVEMBER 15

Oklahoma Mycology Society meeting.
6:00 pm.

African Violet Society of Greater Tulsa meeting. 7:00 pm

**Tulsa Garden Club
Holiday Fundraiser**
tulsagardenclub.org
Monday, November 15

▶ TUESDAY, NOVEMBER 16

Tulsa Herb Society member activities.
9:00 am–11:30 am.

Let's Talk Gardening! 12:00–1:30 pm.

Tulsa Area Azalea Society meeting. 6:00 pm.

Tulsa Audubon Society meeting. 7:00 pm.

▶ THURSDAY, NOVEMBER 18

Tulsa Perennial Club meeting. 7:00 pm (via Zoom.)

Tulsa Area Iris Society meeting. 7:00 pm. Speaker is Ron Killingsworth from Louisiana, a well-known iris hybridizer.

▶ SATURDAY, NOVEMBER 20

Iris Judges Training School with Ron Killingsworth. 9:00 am–2:00 pm



▶ TUESDAY, NOVEMBER 23

Tulsa Herb Society monthly meeting.
10:00 am.

Let's Talk Gardening!
12:00–1:30 pm.

▶ TUESDAY, NOVEMBER 30

Tulsa Herb Society monthly meeting.
10:00 am.

Let's Talk Gardening!
12:00–1:30 pm.



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Tulsa Garden Center: 5-Year Strategic Plan

The Tulsa Garden Center's 2021-2025 Strategic Plan represents the next step in the evolution of the organization. This plan enables us to deliver member value, promote the awareness and importance of public gardens, demonstrate and champion their leadership on critical issues, and support public horticulture with high-quality, comprehensive professional development options that directly serve a diverse membership. The plan is evolutionary, not revolutionary. It does not depart from our core principles, but instead leads to a deeper and more fulfilling connection to our members.

MISSION: To serve as horticultural headquarters with diverse educational opportunities for our community, and to provide exceptional and unique guest experiences.

VISION: For the Hellen Woodward Park & Gardens to be a premier public garden which connects all people to nature.

CORE VALUES: We will exemplify an ethos of kindness, inclusiveness, and a warm, inviting welcome in our approach to customer service and valuing of all people. We will use research-based and data-driven processes in our decision making to provide cutting edge, innovative programs, and services to promote an approachable and healthy culture of lifelong learning. Driven by these core values and 2030 vision, we incorporate equity, inclusion, and respect for diverse perspectives in all our work and will operate with the highest ethical standards and organizational transparency.

GOAL 1: ORGANIZATION EXCELLENCE – *Achieve a high standard of organizational excellence by utilizing the national Malcolm Baldrige performance excellence criteria as a framework to improve overall performance and to enable our workforce to develop its full potential while aligning with the organization's objectives.*

GOAL 2: AWARENESS – *Increase public awareness of programming and events hosted by the Tulsa Garden Center and Woodward Park by developing a comprehensive communications and marketing plan to strengthen the Tulsa Garden Center brand.*

GOAL 3: GUEST EXPERIENCE – *Enhance guest experience for maximum exposure to Woodward Park campus.*

GOAL 4: ENGAGEMENT – *Using a data-driven decision model, create a culture of lifelong learning with programming and events which appeal to broad and diverse audiences through inclusive educational spaces and networks.*

GOAL 5: CONSERVANCY – *Implement a conservancy model to achieve the required high level of stewardship and sustainability for the iconic Woodward Park for the benefit of all constituents.*



Tulsa Garden Center
at Woodward Park

2435 S. Peoria
Tulsa, OK 74114-1350



Our mission is to serve as horticultural headquarters with diverse educational opportunities for our community, and to provide exceptional and unique guest experiences



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