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SFA Gardens NEWS

Notes from the Director

By Dr. David Creech

Every August, I try to make it to the Texas Nursery and Landscape Association convention in San Antonio. The educational talks are great, and cruising past 4,000 booths of amazing horticultural products and plants is inspiring. One goal is to walk every aisle and take in the amazing array of products and services feeding the greenhouse, nursery and landscape industries, which is hard to do with the important jawboning going on with friends, colleagues and former students. Saying hello and catching up on things takes time. Our former students, propagules of the SFA horticulture program, are all over the place. Many are earning big salaries, and most seem pretty darn happy where they are working and living. One thing I've learned over the years is former students rarely remember some high spot from my ninth plant propagation lecture. No, what they remember is working on projects in the garden, and trips to conferences, conventions, gardens and nurseries. There's nothing like a vanload of college students off to distant lands to really bump up the excitement level. Some of those trips I can talk about, some I can't. I must confess, every time I returned from one of those marathons, not only was I worn out completely, I swore I'd never do it again. However, time did pass, wounds did heal, and off we'd go again. SFA Gardens and trips with students are the cement that holds those alumni memories together. In the midst of budget woes, droughts that won't end and floods racing our way, it's easy to forget why we're here and what SFA Gardens' purpose is all about.

So, what is our purpose, and who is behind the mission of these fine gardens? That second question is easy — it's JC Raulston. JC was the North Carolina State University Arboretum director, now the JC Raulston Arboretum. He received his education at Oklahoma State University and the University of Maryland then taught and conducted plant research at the University of Florida and Texas A&M University before finally making the jump to North Carolina in 1975. It was there he

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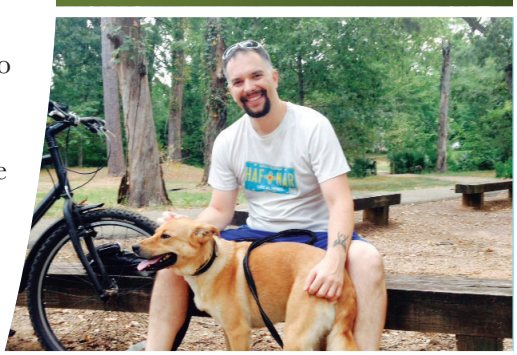

created the NCSU Arboretum, one which eventually carried his name, but only after he passed away tragically in a car accident in 1996. He was 56, way too young.

For SFA Gardens, JC was a source of encouragement, new plants and kindness. In many ways, we became kindred spirits. He taught us never to weaken. I enjoyed a six-month sabbatical at the NCSU Arboretum in 1994 and had the wondrous experience of living with him in a downtown warehouse converted to an avant-garde living space. I helped with his labs, gave a few lectures, and traveled to nurseries and gardens with several vanloads of students. These were whirlwind, early morning to late night events simply because JC scheduled too many stops in too brief a time. He had a huge impact on me personally. I knew JC in the 1970s when I was a horticulture doctoral candidate and he was a young assistant professor at Texas A&M University. His exit from TAMU was less than graceful, and TAMU's loss was NCSU's gain. In North Carolina, JC created an eight-acre garden patch packed to the brim with strange plants from everywhere. For me, his "give it all away and it'll come back tenfold" mantra now has a biblical significance. In fact, I remember a 1986 visit I made to the East Coast when SFA's Mast Arboretum was a tiny patch on the south side of the Agriculture Building. We were unencumbered by budget or staff details. After all, we had no staff, no trucks, tractors or equipment, and our budget was about $1,000 per year. In 1986, I made my first trek to the East Coast to get new woody plants for testing in Texas. JC's was a necessary stop. He was kind enough to spend the day with me, and we loaded up the truck with strange and wonderful woodies, many of which are still shining bright in our garden. For lunch, we snagged some Chinese takeout nearby and had a picnic under the white gazebo. It was there he remarked, and I'm paraphrasing, "Dave, do you know right now is the best your garden will ever be? It's the most fun. No one cares or even really knows what you're doing. You can just go do something without worrying what someone is thinking. But pretty soon, you'll find that the garden will get some attention, you'll have all kinds of new friends, and people will want to help you. Someone will take the lead to create a board of advisors. There'll be volunteers everywhere. Then one day, someone will get cross with you. In fact, you might see them in the garden, and you'll quickly take a different path to avoid a visit. Enjoy your fun and freedom while it lasts." I drove away thinking, "What the heck, that's crazy. I don't agree at all."

Years later, I was at another East Coast conference and sat in on JC's presentation titled, "More Money, Less Plants," a short quirky presentation on how easy it is to wander away from the mission of finding and evaluating new plants. With success and attention comes programming, staffing issues, capital campaigns, meetings, more meetings and too many things to consider. This was another epic lecture that made me think, "Gee whiz, we might need to watch out for that." With zero staff and a tiny budget, the idea was a distant planet.

JC Raulston

As the years passed, SFA Gardens has grown to seven staff members, 128 acres, and a wonderful family of volunteers and supporters. We have cool plants at every turn. Time has been a great friend to this garden. I have come to realize JC was sharing a kernel of wisdom. Still, the JC Raulston Arboretum remains a jewel. Under the guidance of Mark Weathington, an active board, a strong support base and a number of big campaigns, there's a thoughtful reverence to staying true to the mission. I know JC would be pleased. The temptation to wander away from the mission of evaluating new woody plants is always there. For SFA Gardens, our mission remains as it did from the beginning, sealed in concrete a little over 30 years ago:

- Promote the conservation, selection and use of the native plants of Texas.
- Acquire, evaluate and promote new and adapted landscape plant materials.
- Promote plant diversity in the landscape.
- Serve as a living laboratory for SFA students and faculty, the nursery and landscape industry.
- Provide an aesthetic and educational environment for students, visitors and local citizens.

With that in mind, we're out the door to water something, plant something and share it all. Let's keep planting.

Kay Jeffrey and her dog, Bizzy (left); Suzy Carney and her dog, Max (below)

Dogs in the Gardens

By Anne Sullivan

One of the many, often overlooked, benefits of having SFA Gardens in our community is it's the perfect place to walk a dog. I have owned three who explored the gardens over the past years — dachshunds Jenny and Calvin, and Frances. Frances is, well, I'm not sure what Frances is. Greg Grant thinks she's part Jack Russell Terrier like the ones he has, but perhaps only a DNA test will tell for sure. She's definitely a terrier of some sort and loves to terrier-ize.

There is a community of dogs and owners who are regular visitors to the PNPC, Ruby Mize, Arboretum and Gayla Mize Gardens. Suzy Carney and Max, her beagle, are regular garden explorers, usually accompanied by Suzy's sister, Trisha Rhodes, and her two weimaraners, Dash and Darling. SFA Gardens volunteer and photographer Kay Jeffrey also frequents the gardens with her beagle, Bizzy. The dogs enjoy meeting, greeting and sniffing each other on their daily excursions. New friendships have developed between dogs, owners, SFA Gardens staff members and even campus police. Dog owners living close to the PNPC especially enjoy the convenience of walking a dog there. Beth Murphy walks her older canine, Dusty, every morning and evening there, as does another neighbor, Richard McNett, with his blue heeler puppy, Luna.

The gardens provide a welcome retreat from the hot sun during the summer months, when streets are too hot for a dog's feet to handle. This summer produced lingering hot pavement well into the evenings and after dark. The garden paths, in welcome contrast, remain cool and inviting throughout most of the day, thanks to the overhead canopy provided by the wide variety of shade trees in the gardens. And life just doesn't get much better for a hot dog than a cool dip in Lanana Creek, which is a quick jump off the garden trail!

There seems to be a special connection between dogs and gardens. I think our four-legged friends have a deep abiding love for a daily outing surrounded by the wonder of nature. Why else would Frances be so thrilled to see me get out her leash and harness and venture out every morning and evening? She yearns to see the familiar and unexpected that a new day in the gardens brings. The changing seasons offer up new wonders and endless possibilities to enrich the lives of dogs and owners alike.

While enjoying the gardens with your four-legged friends, please remember to keep dogs on a leash to protect themselves as well as the flora and fauna from harm. Waste materials can be properly disposed of throughout the gardens using the waste stations and trashcans available in the PNPC.

SFA Gardens staff members hope you and your dog will enjoy the beauty, fresh air and outdoor exercise the gardens provide. Cooler weather is ahead. Happy walking!

Planting Seeds for the Future:
A Small-Scale Reintroduction of Juvenile Homo Sapiens in Deep East Texas

By Elyce Rodewald

"Every child should have mud pies, grasshoppers, water-bugs, tadpoles, frogs, mud-turtles, elderberries, wild strawberries, acorns, chestnuts, trees to climb, brooks to wade in, water-lilies, woodchucks, bats, bees, butterflies, various animals to pet, hayfields, pinecones, rocks to roll, sand, snakes, huckleberries, and hornets; and any child who has been deprived of these has been deprived of the best part of his education."

Luther Burbank, 1906
The Training of the Human Plant

The reintroduction of endangered plants is part of SFA Pineywoods Native Plant Center's "Three R's" program. Rescue, research and reintroduction is an endangered plants conservation strategy to find simple horticultural treatments that result in healthy plant growth at the reintroduction site during the first two years. Dr. David Creech, director, and Dawn Stover, research associate, are working with Neches River rose mallow, *Hibiscus dasycalyx*; Winkler's white firewheel, *Gaillardia aestivalis var. winklerii*; Texas trailing phlox, *Phlox nivalis ssp. Texensis*; and silky camellia, *Stewardia malocodendron*. They have guided reintroduction projects throughout East Texas, including sites at Boggy Slough, Sandyland Plant Preserve in the Big Thicket, private land in Douglass, Mill Creek Gardens west of Nacogdoches and our own gardens at SFA. The reintroduction sites have proved to be successful, with the endangered plants surviving as self-sustaining, long-lived plant communities.

While the horticulture team has been working in the endangered plant arena, the education team has been working diligently to reintroduce children (notably not an endangered species) to the great outdoors. In 2002, we created an environmental education day camp to do just that. Our original camp was held one week in June for children ages 6 to 10. As word spread about our reintroduction efforts, the camp was offered for two different weeks to accommodate an increasing waiting list and, in 2005, Wonder Woods was added for our youngest campers, ages 4 to 6. As our campers "aged-out" of the program, we saw a definite need to keep teenagers engaged and enthusiastic about being in the natural world, so we added Wilderness Adventures for ages 12 to 15. The program for the middle ages is now called Jack Creek Camp and is available to ages 7 to 11.

Our goal was to create a camp where kids could have outrageous fun, get dirty, explore with all five senses, discover their own creativity, have their curiosity sparked and fall in love with the natural world. We wanted campers to build their outdoor skills and have lots of individual attention in a relaxed and safe atmosphere. We wanted to plant seeds for the future: seeds of appreciation, thoughtfulness and scientific understanding of the natural world. We expected our campers to put the frogs (fish, macro-invertebrates, spiders, etc.) back where they found them and unharmed. We expected kindness, respect and unbridled enthusiasm, and we got it!

Our goals are accomplished with a simple yet varied curriculum. Campers are divided into small groups with two adult leaders. Outdoor safety issues (stinging and biting insects, snakes, heat stress, thunderstorms) are addressed on the first day, and older campers carry a personal first-aid kit. Throughout the week, campers deal confidently with fire ants, bees, poison ivy, ticks and even the occasional venomous snake.

Forest exploration and hiking are always popular adventures, and "teachable moments" are plentiful. This year, our youngest campers spotted the resident barred owl and white-tailed deer along with numerous birds and pollinators. Jack Creek campers found their "base camp" in the forest where they felt at home with the local flora and fauna. Numerous toads, luna moth caterpillars and a pleasant DeKay's brown snake (affectionately named Geronimo Jack) brought squeals of excitement and more questions. Wilderness Adventure campers learned about the waterways in East Texas as they explored Banita Creek and canoed the Angelina and Neches rivers. Camping adventures at Martin Dies, Jr. State Park taught the value of teamwork and mosquito repellent.

We watched campers become more confident in their outdoor skills — archery, outdoor cooking, fishing, orienteering, using binoculars, camping and canoeing. We saw more experienced campers helping "newbies" and offering encouragement. Campers learned from each other, their counselors and community members who share their time and knowledge with us. Ray Cole and Kerry Barnes introduced campers to East Texas snakes, and Sarah Kupka imparted her love of falconry. Dr. James Kroll, aka Dr. Deer, shared his passion for wildlife biology and white-tailed deer.

At the close of the 2019 camp season, we have successfully reintroduced 1,280 juvenile Homo sapiens to the forests and waterways of deep East Texas. Some of our campers have returned to serve as counselors or have gone on to careers in science or environmental education. Many have developed a love of archery, fishing or canoeing and almost all are motivated to "think outside." At the end of the summer, our campers are inspired to hike and play outside, go outside and explore bugs, draw something in nature, dive deeper into adventure, go fishing and, most importantly, come back next year.

Our reintroductions are completed for 2019, and we are already thinking about the next "crop" of children we will meet in 2020. What adventures, exploration, skills, songs, games and friendships will ensure the success of the next planting, and how will we nurture the seeds of change in the hearts and minds of the next generation?

Nothing to Sneeze About

By Jordan Cunningham

At the height of our hot East Texas summer, many flowers are pooped, but there are a few that wait till the heat of the year to bloom. One of these flowers is goldenrod.

Now wait just a minute! Don't skip over to the next page just yet! As a life-long allergy sufferer, I have heard all the rumors about goldenrod, but the fact is they just aren't true. Let me share a few facts about this yellow flower.

The blue green foliage of *Solidago caesia*, blue-stemmed goldenrod

The fabulous flowers of *Solidago nitida*, shiny goldenrod

The tall inflorescence of *Solidago odora*, sweet goldenrod, just beginning to bloom

The most common goldenrod species locally is *Solidago altissima*, or tall goldenrod, which is anywhere from two to four feet tall and is a very healthy spreading perennial. The inflorescence is plume-shaped and made up of many small yellow flowers. This type of goldenrod grows on roadsides across the United States and in flowerbeds where some consider it a weed. Some years, it feels like we are up to our ears in the stuff, but our local pollinators can't get enough. Goldenrod is a very important late summer nectar source. Bees, wasps, butterflies and many other insects rely on goldenrod.

Although they often get the blame for seasonal allergies, goldenrod flowers are pollinated by insects, meaning the pollen is large and sticky — perfect for sticking to a bee or butterfly and too heavy to be carried by the wind. It relies on pollinators to move pollen from flower to flower; therefore, there is no goldenrod pollen floating around in the air, sneaking into our nose cavities and causing people to sneeze.

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Seasonal allergies are caused largely by inhaling the pollen of plants that rely on the power of wind for dispersal. Wind-pollinated plants (like ragweed, for example) make large amounts of pollen particles, which are taken up by the wind and can land anywhere. Sometimes they land on another flower of the same species and begin pollination, but occasionally they land on your car, your dog, or inside your throat and nose, kick-starting allergies. This is not the case for goldenrod. The large, yellow, sticky pollen can be found either on the feet of pollinators or on the flowers themselves.

"Unless a bee flies up your nose with pollen on it, there is no way goldenrod could make you sneeze," said Dawn Stover, our favorite research associate at SFA Gardens. She spends a fair amount of time bent over flowers at the Pineywoods Native Plant Center, learning about the habits of our local pollinators.

This year at our plant sale, we will have a few great selections of goldenrod available: *Solidago caesia,* the bluestem goldenrod; *Solidago nitida,* shiny goldenrod; and *Solidago odora,* sweet goldenrod. The bluestem goldenrod is a great clump-forming perennial that enjoys part sun to part shade. Shiny goldenrod has many flowers with leaves that are just a bit waxy and prefers full sun. Sweet goldenrod is another great clumping perennial that likes full sun, and the foliage has a sweet smell to it.

Now that you know that goldenrod is nothing to sneeze about, we hope you will consider adding it to your pollinator garden!

How much water is enough?

By Dr. David Creech

From a rainy spring and early summer, we're now struggling through a spell of heat and drought. That's life in the piney woods. For SFA Gardens, keeping plants watered is an epic battle. Where the sprinklers live, there are always rain shadow problems, obstructing foliage of trees and shrubs that leave dry pockets in the landscape. For drip irrigation, we're about to just give up. Squirrels, raccoons, possums, rabbits, pigs and maybe elephants are making drip management a headache. When a drought hits, the critters go to biting pipe incessantly, resulting in geysers that destroy pressure and cheat plants elsewhere in the system. I have no cure other than to patch incessantly, which gets old quick, so Duke and I have decided to give up and move to a brass shrub head system fed off a lightly buried PVC sub main starting in the fall.

SO, HOW MUCH WATER IS ENOUGH?

I get this question a lot, and the answer depends on who you ask. Plant-water use models, from simple to complex, all rely on factors everyone understands. Relative humidity and temperature are part of the impact. All my former students can tell you plant-water use is related directly to the amount of water lost from a Class A pan, which is a pan of water under a shelter with a roof at about three feet above the ground. The amount of water in inches that evaporates in one day can be related to plant-water use. Many models assume plants run along at 70% of Class A pan. It's a good estimate. After all, a leaf is not a free water surface, and plants have evolved creative ways of keeping water in. Some species do better than others, so there's a genotype factor. An agave gets

Bald cypress in distress as a result of not enough water.

by on less than an azalea. Stomata and lenticels close tight to slow transpiration. For those extreme conditions, pubescence and waxes arm desert shrubs and lilies against water loss. Some plants just give up in heat (maybe the smart ones), throw their leaves away and go dormant, to spring back cheerfully to life when the rains return. Still, Class A pan evaporation data is useful and readily

available from weather stations across the state. For nurserymen and landscapers, there's a simple but useful formula to consider. For my water-engineering colleagues, let's recognize plant water use models can take volumes, and it's the stuff of textbooks. But for a ballpark figure, this one is hard to beat:

$Q = D^2 \times E \times .343$, where:

Q = daily plant water use in gallons

D = diameter of the plant at drip line (feet)

E = Class A pan evaporation (inches)

.343 = a factor based on 70% of the Class A pan evaporation

For example, what's the plant water use total for an azalea bush 6 feet in diameter in July when the average Class A pan for the month runs .30 inches per day?

Q = 36 X .30 X .343 = 3.7 GALLONS PER DAY WATER USE

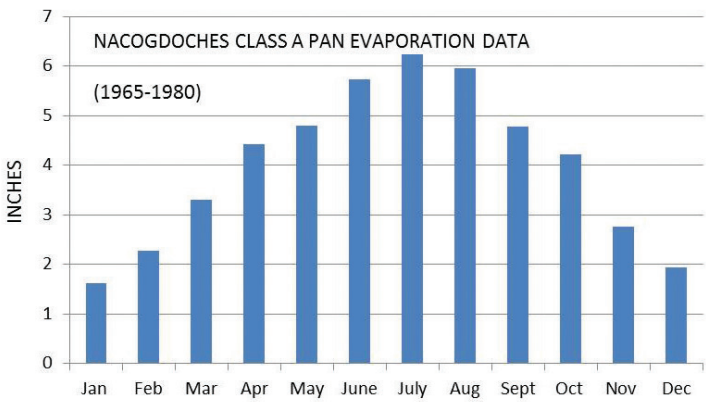
Shocking? Yes, but keep in mind in landscapes, there's water in the ground, root system spread, and that "bank" of water in the soil profile for when times are tough, which is why a woody tree established for a good number of years is in better shape than one recently planted. An established plant effectively mines an area wider than the plant. For a container shrub, life's a bit more difficult.

For the nurseryman, what's the water use for a three-gallon azalea plant in July with a diameter at the drip line of two feet when Class A pan is running .30 inches per day?

Q = 22 X .30 X .343 = .41 GALLONS PER DAY

In this case, the three-gallon azalea needs to find and use a little less than a half-gallon of water per day simply to prosper. For the week, 3 to 3.5 gallons means the difference between living and dying. Whether it's by drip, spitter or sprinkler, the root system just doesn't care.

So, what happens when you push the envelope? With high temperatures and no rain, humidity plummets and evapotranspiration rates soar. While I've always said Nacogdoches in June, July and August enjoys Class A pan rates in the 2 to 2.5 inches per week range, the figures for hot dry spells can rise to an alarming 3 to 3.5 inches per week. With no rain, the soil "bank" of water simply dries up. Plant water use continues, but the water isn't there. The plant crashes.



The bottom line is gardeners need empathy and energy to keep things watered. Planting drought-tolerant plants makes sense. Paying attention to watering in the first few years can mean the difference between a tree that lives hundreds of years or one that leaves the scene in its youth. Reacting quickly to drought stress problems before the plant is toast is part of the program. Waiting to water when the plant is already close to death is rarely a good idea. Until next time, let's keep planting … and watering.

Micro-internships: National Network of Interpreters Aims to Cultivate Diversity of People, Places and Opportunities

By Jocelyn Moore

When I'm not wearing my hat as an outdoor educator at SFA Gardens, I am a student finishing an interdisciplinary degree here at SFA. This season, I've had the exciting opportunity to wear both hats at once. The Micro-Internship Network is a collaborative project SFA Gardens is helping to shape, and it aims to host transformative micro-internships amongst interpretive sites across the country. Initiated by former SFA forestry professor

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Crater Lake, Oregon

Theresa Coble and her team at the University of Missouri - St. Louis, this collaborative network is made up of interpreters and host sites nationwide. The micro-internship program typically lasts two to three weeks and strives to expand access for diverse students at nature, historic and heritage sites.

I had the pleasure of attending a micro-internship prototype planning meeting at UMSL with other members of the network as we explored the pathways and barriers to implementing this unique project idea. Meanwhile, as an SFA interdisciplinary student, I've had the amazing opportunity to pilot briefly an internship with the generous staff at the High Desert Museum in Bend, Oregon. By shadowing the talented education, living history, wildlife and development staff, I've been treated to a wonderful sampling of their amazing people, programs, spaces and ideas. I am grateful to take home a wealth of resources and educational activities to explore with my fellow Lumberjack interpreters and educators.

A fun analogy comes to mind when I begin to describe this project. I would compare my internship experience to mycelium — the connective network of fungi growing underground among and within root systems. Mycelium's superpower is it can transport resources from one plant species to another depending on their respective surpluses and deficiencies. Leaving this forest floor analogy and returning to human civilization, many diverse and non-traditional students lack the resources and opportunities to pursue interpretive internships and, as a result, may face barriers to future careers in the field. This supportive network aims to broaden access to these opportunities. Meanwhile, sites may gain fresh and broadened perspectives from individuals who hold diverse socioeconomic and cultural backgrounds. Just like mycelium's collaborative superpower, these micro-internships strive for symbiosis by recruiting diverse, talented staff members while ultimately attracting new, underrepresented audiences to host sites.

Beauty abounds at the Deschutes River restorative wetlands project.

As summer winds down, I return to Texas inspired and renewed. I leave Oregon hoping to lend insights from my internship to nurture the implementation of next year's Micro-Internship Network. I look forward to the seasons ahead, which will no doubt be filled with inspiring mentors and collaborators, both near and far.

Discovering Native Orchids

By Dawn Stover

Orchids are a plant in which I only have a passing interest. They are exotic and spectacular when in bloom, somewhat dull when not, and can be fussy to coax back into bloom. They need light, but not too much; water, but not too much or too little; a moderate climate, but not too hot or too cold; and the proper growing medium that is water retentive yet quick-draining. Admittedly, those requirements are not too much to ask for the reward they offer when in bloom, but I just don't have time for all those details. Who has time for fussy plants? Not me, at least not until I retire. However, I'm afraid I may have been bitten by the orchid bug.

Last July, during one of our many trips into the surrounding piney woods led by botanist and SFA alumnus Peter Loos, I encountered my first native, terrestrial orchid. Peter is hard to keep up with as he knows more botany and botanical names than many people combined and has an internal map that rivals any compass or GPS device ever made. On this particular trip to the Davy Crockett National Forest, botanist Joe Liggio, who co-authored and photographed for "Wild Orchids of Texas," accompanied us, so I knew we were looking for something special: the spiked crested coralroot orchid, *Hexalectris spicata*. Talk about a gateway drug! Finding something like this in the wild will take you to your knees and take your breath away in the same instant.

Since that first encounter, Peter has introduced me to at least nine more native orchids. Some are unassuming, some are curious, and some are overwhelmingly magnificent. If tropical orchids are fussy, our native orchids are near impossible. As a whole, most require specialized pollinators or extremely specific habitats to survive and reproduce — oftentimes growing in conditions that are impossible to replicate in a nursery

***Hexalectris spicata* - Crested coralroot orchid**

***Isotria verticillata* - Large whorled pogonia**

***Platanthera nivea* - Snowy orchid**

***Platanthera ciliata* - Orange-crested orchid**

***Pogonia ophioglossoides* - Rose pogonia**

***Calopogon tuberosus var. tuberosus* - Tuberous grass pink orchid**

or garden. For example, spiked crested coralroot are achlorophyllous and mycoheterotrophic, meaning they don't have chlorophyll to photosynthesize energy and instead obtain nutrients from mycorrhizal fungi present in specific soil conditions. There is no way to replicate these conditions outside of their natural habitat. Also, they are highly prized by collectors and often victim to poaching. For all of these reasons, native orchids are plants I will never collect from the wild, even if I have the great fortune of finding them on my own property.

I've encountered several orchids in hillside seeps where pitcher plants are often found. Orchids here are in danger of habitat loss from development of forest land or fire suppression. Growing conditions consist of very acidic, nutrient poor, fine sands with an underlay of impervious clay that allows groundwater to seep to the surface. Even in summer, when the surface soil looks dry, the subsurface is often still moist. The plant diversity here is astounding yet rare due to the infrequent occurrences of these specific growing conditions.

In mid-May, I caught the last blooms of the rose pogonia, *Pogonia ophioglossoides*, with its soft pink, hard-to-see flowers. I also was fortunate to experience the tuberous grass pink orchid, *Calopogon tuberosus var. tuberosus*, which blooms in late May and early June. Three to 10 bright pink flowers can grow on each stalk, opening from bottom to top. As we turn to the heat of August, the orange-fringed bog orchid, *Platanthera ciliaris*, shows it's brilliant, frilly orange flowers and often grows in or near sphagnum moss. The snowy orchid, *Platanthera nivea*, also is recorded in bogs, but my first encounter was in a coastal prairie in Harris County. These showy white orchids, almost resembling white Roman hyacinths, were sprinkled all throughout this wonderfully preserved space.

Some native orchids, especially in the shade of our piney woods, are easy to miss. The large whorled pogonia, *Isotria verticillata*, is actually a tiny thing best appreciated on hands and knees. Three long brown sepals surrounding the flower give this orchid its exotic appearance but are camouflaged easily with surrounding leaf litter. They bloom near the end of March. The foliage of the cranefly orchid, *Tipularia discolor*, is spectacularly easy to find in spring with its large crinkly leaves, often with dark purple spots. If ever in question, simply turn the leaf over and the solid purple underside will serve as confirmation. However, the foliage goes dormant before tiny purple-green flower spikes appear in late summer. They are not showy and easily blend in with the surrounding forest. The hardest to find, in my opinion, is the southern twayblade, *Neottia bifolia*. On a good day, plants in bloom might reach a hand's height, but the two tiny leaves that occur near or at ground level are nigh bigger than a quarter. Although they can produce up to 25 flowers per plant, I'd be generous if I called the purplish-brown flowers and stem "tiny."

Finally, some plants are simply more fantastic in person than you could realize. The moment you find what you are looking for, it seems as if the clouds part and heavenly sunbeams stream down upon your flower. You can nearly hear the imaginary choir sing a note of joy and wonder. That moment happened for me earlier this year when I encountered a Kentucky lady's slipper orchid, *Cypripedium kentuckiense* — rather large and conspicuous flowers with large, yellow bowl-shaped labelleum (modified petal in orchids) set off in contrast by large, reddish sepals and petals. They prefer rich, moist, open woodlands and are listed as globally vulnerable due to limited range and loss of habitat. You can actually find Kentucky lady's slippers

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for sale, but please make sure they are sourced from tissue culture from a garden specimen rather than collected from the wild.

I've often heard the devil is in the details, meaning things should be done thoroughly and thoughtfully, and that's precisely the way these beauties were designed. Reportedly 54 native Texas orchid species exist. I'm not foolish enough to think I can see them all in my lifetime, but at least half of those are in East Texas, and I'm going to give those a shot!

Upcoming Events

OCT. 5: FABULOUS FALL FESTIVAL PLANT SALE
Shop for hard-to-find, "Texas-tough" plants, including Texas natives, heirlooms, perennials, shrubs and trees, with an emphasis on pollinator-friendly natives as well as SFA Gardens introductions. The sale runs from 9 a.m. to 2 p.m. at the PNPC.

OCT. 10: THERESA AND LES REEVES LECTURE SERIES
Learn from SFA Gardens' Jocelyn Moore about, "Changing Young Lives, One Garden Bud at a Time: Environmental Education for our Youngest Citizens."

OCT. 19: OUTDOOR SKILLS FAMILY DAY
Join the SFA Gardens' education team from 9 a.m. to 1 p.m. in the PNPC for an adventurous day honing your outdoor skills. Practice archery, orienteering, geocaching and binocular skills. Try your hand at Dutch oven cooking and other outdoor cooking techniques. Take a guided nature hike and test your knowledge of plant identification. Learn how to cast a fishing line and enjoy the serenity of Texas Forest Country. Admission is free.

NOV. 14: THERESA AND LES REEVES LECTURE SERIES
Listen as Jeb Fields from Louisiana State University Gardens in Hammond, Louisiana, explains, "Gardening in the Deep South the Cajun Way: Observations from Plant Trials."

DEC. 7: DECK THE HALLS – CREATING EVERGREEN DECORATIONS FOR THE HOLIDAYS
Join Dawn Stover, SFA Gardens research associate, in creating elegant wreaths and garlands using locally sourced greenery from 9 a.m. to noon at the PNPC. Learn the principles of wreath, garland and centerpiece construction, and create a wreath to take home for the holidays. Cost is $30 per person for SFA Gardens members and $40 for non-members.

DEC. 12: THERESA AND LES REEVES LECTURE SERIES
Consider SFA Gardens Director Dr. David Creech's theory that "Reconnaissance in the Pursuit of Knowledge is Seldom Wasted: New Plants for a 21st Century East Texas."

The free lecture series events will begin at 7 p.m. in the Brundrett Conservation Education Building. A drawing for rare plants from SFA Gardens will follow.

For more information, contact SFA Gardens at (936) 468-4129 or sfagardens@sfasu.edu.


Camellia sasanqua 'Moonshadow'


Camellia sasanqua 'Setsugekka'

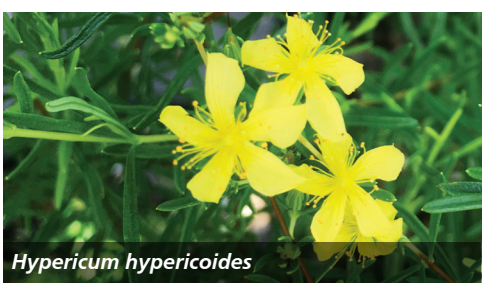

Lobelia cardinalis

Fabulous Fall Festival - Plant Sale -

9 A.M. TO 2 P.M. | SATURDAY, OCT. 5

PINEYWOODS NATIVE PLANT CENTER


Gardenia jasminoides 'Whispering Pines'


Hypericum hypericoides


Asclepias variegata 'Redring milkweed'


Rudbeckia fulgida 'Goldsturm'

SFA GARDENS

COME GROW WITH US.

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STEPHEN F. AUSTIN STATE UNIVERSITY




"Study nature, love nature, stay close to nature. It will never fail you."

Frank Lloyd Wright