



## Notes from the Director

By Dr. David Creech

Is this the most handsome pack of gardeners you've ever seen? We decided to take our annual staff picture in the early December glory of the Ruby M. Mize Azalea Garden. The maple show was about as good as it's ever been. First, let me say it's not easy to get all nine staff members in one spot at the same time. As luck would have it, we ran into Elton Scifres, an amateur photographer who happened to have a nice tripod and camera. That told me he was an expert. I asked if he'd take some photos of our group and if he minded sending me the high-resolution images for our use. Thank you, Elton.

As we start the new year, let's recognize the staff members for all they do. There are nine of us, with four on half-time. In academic talk, we call that seven FTEs. Since 2007, Duke Pittman is the senior member, our garden supervisor, and he can't be fired, simply because he knows where all the underground valves are and how to fix things and shut things down. Since 2017, Jordan Cunningham manages the greenhouse and nursery crop production. Being incessantly cheerful and optimistic is her calling card. Thomas Dimmitt

and Devin Stage are two garden technicians that have been here since right before the pandemic hit in March 2020. They have kept the Mast Arboretum, Ruby M. Mize and Gayla Mize gardens in good shape. Alan Sowards is our half-time environmental education program coordinator, and Tammy Purser is our new program associate, also half time. Both are a breath of fresh air in the program and they are here to make things happen. Sowards is steering our K-12 program back to its former glory and Tammy is taking connecting SFA Gardens to the SFA and Nacogdoches community to a new level. Finally, Jhett Myers and Peter Blanchette are two new garden technicians. Myers is in charge of our varied fruit research efforts and Blanchette at half-time is making his mark at the PNPC, in the nursery and greenhouses and at our Moody Gardens research project.

## Weather

As any gardener is prone to do, I must ponder the weather.

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Gardeners are trained and tuned to worry about the weather. It's a habit we can't break.

Let's preface 2022 with a short recap of 2021. The epic snow apocalypse known as Uri came in mid-February 2021 and wouldn't leave. With an all-time record low of minus 4 F on Feb. 16, our gardens were laid low. Many trees and branches fell from above and the gardens were closed for two months for safety reasons. The debris removal effort continues to this day. New sunlight opportunities are everywhere. The only solace was a six-inch cover of snow that protected many plants that would have normally been goners. Recovery in 2021 and this year has been encouraging.

Enter 2022 and we started well, but before we knew it, we were facing record heat and drought. With summer 2022 temperatures cracking 100 F day after day, no rain in sight, our garden lives became a treadmill of watering chores. A good rain in early August helped, something our friends to the west didn't enjoy. Just to spice up this winter season, Mother Nature decided that November and December needed to be mild, gentle and reassuring. We enjoyed a light frost here and there, most plants escaping any damage at all. Unfortunately, 2022 decided to close down with another epic freeze event and plants were poorly acclimated to deal with it. From warm to a serious winter blast, one that came roaring in with wind and a low around 10 F on Dec. 23. That was not exactly what I had in mind. Plants were poorly acclimated, barely hardened off. At this writing, the damage is now obvious to the eye. With winter not yet over, it'll be interesting to see how this plays out. Surely, 2023 will be a better year.



## How many maples are enough?

Having hundreds of Japanese maple varieties in a garden under high canopy pines is a fine idea for both a spring and a fall show. The spring and fall color display continues to evolve. This year's color show was particularly strong in the Ruby M. Mize Azalea Garden. Why that happened is due to a number of factors. After 20 years, we finally have good sized healthy trees. We also believe the difficult, long, hot summer may have actually set the maples up for better pigment levels in the fall. Another possible explanation for the good fall show was a staff that deserve kudos for keeping enough moisture in the root zone, at least enough to ensure leaves didn't burn. Maples can do that, of course, and the more burn equals less fall color. More summer burn equals less spectacular a fall. Heat equals stress equals better fall color. I'm sure there's math involved.

## Changes are brewing

At this writing, it's no secret that this institution of higher learning is about to go into a system. With the University of Texas offer, it's apparent that SFA will be joining that system. The University of Texas has approved the move and all that's left is for the legislature to wave the wand. For the administration, faculty and staff, it's been an interesting roller coaster ride of people, plans and promises of a better day. The question for all of us is what does it mean? From our small perch in the academic tree, SFA Gardens thinks going into a system seems like an opportunity more than anything else. The SFA Gardens belief is that strong programs will prosper, poor performing programs will be whittled back and the university will get back on track for high performance. My crystal ball tells me that SFA's talents in teaching, research and outreach will soon be given a boost. Trust me. Change, in this case seems like a good thing. Until we know if my theory is right, let's keep planting. 🌱



Acer japonica 'Red Baron'

# Back in Business at the Moody Gardens Research Project

By Dr. David Creech

It's a brand new day for our SFA Gardens project at Moody Gardens. Devin Stage, Peter Blanchette and Trevor Capper spent a few productive days in December refurbishing our research plot on the west side of Moody Gardens. They were there to repair some breaks in the irrigation system and planting our first batch of trees. At the plots, almost a mile of rows has been refurbished with bark mulch and off-island sand to create a bed about 4-feet wide and 1-foot high. Our strategy is to provide young plants with a good start to get roots spreading and the plant acclimated to its new home. To be honest, the conditions here can best be described as a torture test of epic proportions. The plots are 3-to-4-feet above sea level. Salty water is just a hundred yards away and high tides slide into or near the plot way too often. Add in incessant winds, salt laden air and mosquitoes the size of small birds, well, you get the picture. Six years after we started this project and five master's thesis projects later, we have a new arsenal of woody trees, shrubs and palms going in the ground, all there to be tested for climate and soil resiliency on Galveston Island. It's an important and timely project. We're happy so many of our research plot trees were tree spaded into various city and school parks on the island in the past year. We'll be tracking their progress in their new and permanent home, and looking forward to what the new plantings at Moody Gardens have to tell us.



It's all about terminology. Scientists have had a lot to do with the term "climate change" replacing "global warming." Everyone has seen the predictions of melting ice, rising seas and violent storms punctuated by long stretches of punishing heat and droughts never seen before. Increasing carbon dioxide drives increasing temperatures, pumping up the energy of the atmosphere. For those of us who have been shouting from the rooftop to plant more trees, it's encouraging to see government agencies and conservation foundations reacting with some serious efforts nationally, regionally and locally. For those of us in agriculture and forestry, we're on a mission to bring the term "climate resiliency" into the mainstream when it comes to the vegetation that surrounds our lives. That means it'll be warmer, but also more energetic. In the piney woods, it's apparent we need plant materials that are more drought and heat tolerant, more salt and alkaline tolerant, and judging from recent events, they need to be pretty darn hardy.

We want to give a big thank you to Moody Gardens, John Zendt, Donita Brannon, Leslie Youngblood, Nick Brown and the Moody Gardens shop personnel for their support of this project. Making a difference, one tree at a time. 🌱



# Sassafras: Family, Controversy, and Horticulture

By Thomas Dimmit

In addition to being pretty, medicinal, nurturing, full of oxygen, providing shelter and fiber, plants can also create nostalgia. For example, sassafras trees (*Sassafras albidum*) remind me of my grandmother. She was born in 1940 in rural Indiana, the oldest of 10 siblings a big Irish catholic brood. My mother told me that when my grandmother was a child, she collected sassafras roots to make a root beer tasting tea for her big family. I imagine it took numerous roots! A benign story but, anybody that has read "My Side of The Mountain" can sympathize with how incredible that sounded to me as a child. Unfortunately, growing up in Central Texas, I never got the chance to hone my sassafras tea brewing skills. At least not until I came to Nacogdoches. However, I wanted to make something even tastier than tea; I wanted to make sassafras jelly. Root beer-flavored PB&Js sound awesome, right?

I collected sassafras roots from an undisclosed location and began the process by reducing the roots in water over the course of a few hours. The final product of this work? A super concentrated sassafras tea that, with some sugar and pectin, made a scrumptious jelly! Only I had leftover tea. The brewed tea seemed silly to waste so I drank nearly a half-gallon. Much to my surprise, I learned firsthand that sassafras tea had some euphoric and energy boosting properties. I was wired for the next couple of hours, feverishly checking the fridge to see the cooling process of the jellies. The jelly came out fine and I didn't develop a dependence to sassafras tea. Full disclosure, I'm sure the only reason I felt jazzercised from the tea was due to it being concentrated so heavily.

The clinical side effects of ingesting too much sassafras include, but are not limited to, sweating, hot flashes, increased blood pressure and hallucinations. What causes that? A poisonous organic compound present in sassafras called safrole (Methylenedioxyamphetamine). One cup of sassafras tea made with 2.5 grams of roots contains about 200 mg of safrole. This compound is carcinogenic leading to the FDA ban of root beer and other medicines using sassafras.

This doesn't stop people on the internet from claiming how safe sassafras is. Any site for recipes on tea, jelly, candies, or filé usually has comments like "I've been ingesting sassafras regularly for years and I don't have cancer. Lab rats got cancer, not people." Personally, if it gave enough lab rats cancer in an FDA clinical study to ban it, I'm not going to be a regular connoisseur. Additionally, fodder for the debates about sassafras

banned status by the FDA are because safrole can be a key component to producing the illegal drug ecstasy (3, 4-methylenedioxymethamphetamine).

Horticulturally, sassafras is a great native, medium to small sized tree that grows in the acidic, sandy loam soils present in East Texas. From personal experience, they're most common near well drained stream banks or adjacent areas. It is easily identified by its fragrant laurel family traits. The leaves and bark have a distinct, sweetly pungent smell described as lemony or cinnamon-like. Additionally, the leaves are easy to spot due to their lobing, which causes a mitten-like appearance. Deciduous in characteristic, it can produce fantastic fall color. Leaves turn from green to bright orange, red and salmon color. Furthermore, it is fantastic for wildlife and pollinators due to its small yellow flowers that form oval blue fruits. ✨



Picture of a mature, 45-foot-tall sassafras taken in Yellville, Arkansas.



# Cool Season Color - Violas vs Pansies

By Jordan Cunningham

Fall and winter have more gray, cloudy days with less sunlight, and the cool weather closes the season for showy summer plants like pentas, daisies and coleus. It's this time of year that drives plant people back to the store in search of something to brighten up their yards and hearts. At a quick glance at the home improvement stores and the street-side flower beds of banks and shops offers the happy faces of pansies... or maybe violas? When most folks see the bright faces of this winter color flower, they default to the term "pansy". However, reading tags in the garden departments of stores produces the term violas. So, which is which and what is the difference?

While pansy is the term we are most familiar with, viola is the catch all. The genus *Viola* includes both annuals and perennials of many colors and sizes from which the selection of flowers commonly called pansies derive. Therefore, all pansies are violas but not all violas are pansies. Although the two are closely related there are still a few visual and habitual traits that set them apart.

Pansies have a larger flower - about 2 inches wide, and they have a well-behaved growing habit reaching 6-to-12-inches tall. They are the showiest of the two. The larger flowers come in more color options including purple, blue, yellow, orange, red and pink. There are over 300 pansy hybrids on the market with varying colors and mixes, some with deep brown "faces" and others with pure colored petals. Pansies are heavy feeders; they need a ready supply of nutrients to support the production of large flowers and bright colors.

Violas, on the other hand, have smaller flowers but more of them. The flowers display shades of purple, blue, white and yellow. Violas grow shorter and closer to the ground at 3-to-8-inches tall. They trail and spread in an almost vine-like manner. They also tend to seed out and spread more than pansies, popping up in other spots in the garden, hence the name "Jonny Jump-up". Violas are more cold-hardy and recover from cold damage faster. Their fuller and thicker growing habit makes them great for containers.

Both Pansies and violas have five petals. In my research, I have found that many people say that the two can be differentiated by the petal orientation. Supposedly, violas have two petals that reach up and three that grow down while pansies have four petals pointing up and only one that grows down. I, however, have gone absolutely cross-eyed trying to confirm or deny the truth in this. Feel free to count the petals yourself.



Along with a similar number of petals, pansies and violas have similar growing preferences. Both prefer cooler growing seasons although violas can seed out well into the spring. They like full to part-sun and protection from random hot Texas winter days. Plant them in mid-fall when things start to cool down and lower humidity starts to prevail. All members of the viola family prefer well-drained soils and produce more blooms, as well as healthier blooms when regularly deadheaded.

So, which will you choose for your yard? Pansies, violas, or both? ✨



# Environmental Education Events Update

By Dr. Alan Sowards

On June 15, 2022, we presented and participated at the Region VII Education Service Center's EcoSySTEM Conference. One of the topics discussed was "EcoRise" an organization mobilizing a new generation of leaders to design healthy, just and thriving communities for all. They offer a range of curricula and programs designed to advance environmental literacy, sustainable schools and equitable access to green career pathways. They were involved in assisting us with the solar panels on the rooftop of the Brundrett Conservation Education Building.

In September 2022, we discussed and met about the George and Fay Young Foundation Grant. We received a board of director's discretionary grant funding of \$7,500 and hope to be submitting a grant in Spring 2023 to support environmental education funding for the SFA Gardens for the next three years.

Nacogdoches Junior Forum announced awarding Christ Episcopal School \$1,381.36 for the 2022-23 school year. These funds will be used to purchase garden supplies, garden literature, art, a compost bin and construction of a water recovery system (rainwater cistern). Dr. Alan Sowards, environmental education program coordinator was designated project director to coordinate these projects. Junior forum volunteers will also assist with the implementation of the community service connection. These funds extended the raised garden project started in Fall 2021 from a \$2,100 HERO Grant from Lowe's awarded to Christ Episcopal School's 120 Pre-K through fifth grade students.

The Annual WILD About Science field investigations was held at the SFA Gardens on Oct. 24 and 28, and Nov. 4, 2022. Training of SFA elementary and middle school science interns were scheduled at the Brundrett Conservation Education Building. Ted Stephens, education director with the Texas Forestry Association, assisted with the training and planning for these events. Dr. Leah Kahn's 19 middle school science interns and Sowards' 39 elementary science interns were trained at the Brundrett Education Conservation Building. The interns taught lessons to approximately 700 fourth and fifth grade public/private school students from the East Texas area schools. The field investigations were taught at the SFA Pineywoods Native Plant Center and Mast Arboretum on three different days.



## Bugs, Bees, Butterflies and Blossoms

I am excited to announce that we will be offering the 25th annual Bugs, Bees, Butterflies and Blossoms field investigation April 20 and 21. We started the BBBB (from a "Growing Minds" Grant) in 1998, and through 2022 these are the following attendance numbers:

- 47,838 elementary students (K-third grade)
- 1,705 SFA science interns
- 2,384 classes (approx. 20 students in a class)
- 4,768 + classroom teachers
- many parents



I would like to end my report with a shout out to Alondra Cavazos, my SFA practicum student. She put in more than 200 volunteer hours to support the environmental education mission of the SFA Gardens. Alondra was energetic, self-motivated and a great collaborator. She was an advocate for children of all abilities and has a passion for environmental education. She graduated in December and moved back to her home town in Houston. She will be greatly missed. We thank her for her many contributions made to SFA Gardens. 🌱



The following are names of individuals that went to school in Nacogdoches, attended BBBB while they were in elementary school, selected to get their education degree in elementary education at Stephen F. Austin State University and took my science methods course. They were trained and presented BBBB activities to students from the East Texas area. They now are teaching in East Texas and bringing their own classes back to BBBB, completing the full cycle.

- Megan Kegler, Nacogdoches ISD and Center ISD
- Abigail Garrison, Nacogdoches ISD
- Heather Labosky, Fredonia Hill Baptist Academy and Douglass ISD
- Andy Wallace, SFA Charter School
- Ashley Bridges, Nacogdoches ISD
- Carla Redfield, Mt. Enterprise ISD
- Hanna Van Horn, Lufkin ISD

*\*All these individuals went through the SFA Charter School*



# Native Plant Spotlight: Narrow Leaf Mountain Mint, *Pycnanthemum tenuifolium*

By Jordan Cunningham

This year SFA Gardens has been absolutely tickled pink with our *Pycnanthemum tenuifolium*, the narrow leaf mountain mint displayed at the Pineywoods Native Plant Center. As we have been working to freshen up the front yard beds of the Tucker House, a quick planting of this beautiful native perennial was implemented in the Mesic Zone late in fall 2021. The spring, summer and fall 2022 have benefited greatly from it.

The garden beds along the brick street entrance are named - starting closest to the house - the Xeric Bed, the Mesic Bed and the Riparian Zone. The intent was that the plant material would start out very drought-tolerant in the Xeric Bed, then change over to more moisture-tolerant in the Mesic Bed, and end up with plants that prefer creek-side conditions in the Riparian Zone. The carrying out of this plan has always been difficult, specifically due to the lack of irrigation in the beds and zones that were intended for plants that like wet conditions. After receiving generous donations from the Four Seasons Garden Club and a few community supporters, we set out to remedy this problem.

Our goal this year has been to clean out and prepare these garden beds for new plantings and a new irrigation system in the spring of 2023. In the meantime, *Pycnanthemum tenuifolium* was the perfect fit for the empty spot in the Mesic Bed because it is found in dry or raised areas of wet and stream-side locations.

*Pycnanthemum tenuifolium* is found in a wide range of eastern North America from East Texas over to the Carolinas and up to Maine. It is not really a mountain-dweller, but it does prefer high, dry spots in meadows and prairies. The family is Lamiaceae, the mint family. All parts of the plant produce a minty

aroma. The strength and flavor of mint varies from plant to plant. Like other mint relatives it can spread, sometimes aggressively. The leaves are, you guessed it, narrow and needlelike, but soft to the touch. In the spring it produces nice, tall stocks with multiple inflorescences. The 2-to-3-foot stocks tend to flop in the late fall, especially in very fertile soils, but the leaves and branches hold their color well into the cold season.

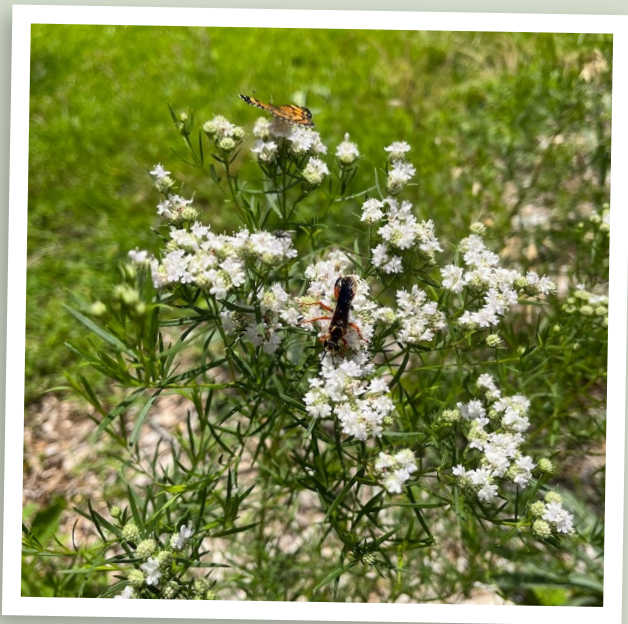


***Pycnanthemum tenuifolium* holds its color well into the cooler months**

The inflorescence is a compound umbel of small white flowers that bloom from early summer to fall. The simple white flowers are a favorite for all kinds of pollinators. During the spring I looked forward to stopping by the garden bed where they are planted to see who was visiting. Many different bees, wasps and flies made stops. I even got up close to a be



spring, I looked forward to stopping by the garden bed where they are planted to see who was visiting. Many different bees, wasps and flies made stops. I even got up close to a beautiful zebra swallowtail butterfly while she worked on the blossoms. The bushy groupings of many small flowers make a great landing zone for larger pollinators like butterflies and some of the prettier wasps. Lots of flowers also means lots of work. Pollinator friends can spend a long time at a *Pycnanthemum tenuifolium* plant working each flower. This means you have more time to get a good picture!

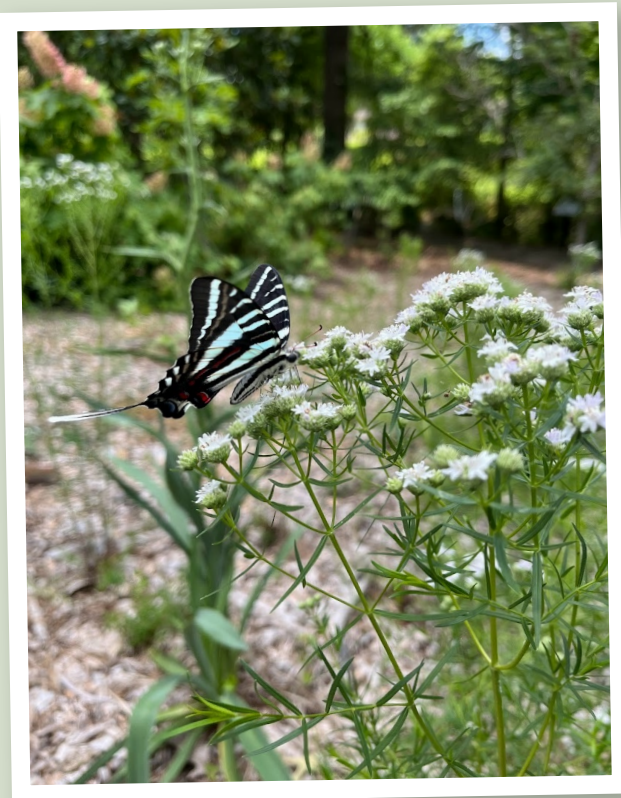


There are many great reasons to add *Pycnanthemum tenuifolium* to your garden. Plant in well-drained soils with full to part-sun and let nature do the rest. It is important to have a wide selection of flower types and sizes in your garden. Not only do the differing colors and sizes add interest to the landscape, but they can also provide resources for many kinds of bugs and wildlife throughout the year. While *Pycnanthemum tenuifolium* has a simple white flower, the shape and timing of the bloom are perfect for hungry summer nectar seekers. Foliage is another great component to work with in the garden. The thin leaves of this mint provide a fine, almost silvery texture that complements rough large foliage. And the minty aroma is a plus!

Stop by to see our planting of *Pycnanthemum tenuifolium* here at the Pineywoods Native Plant Center and take a peek at many other native plants

that would do well in home gardens. We hope to move forward with our update of the Xeric Bed, the Mesic Bed and the Riparian Zone, as well as other native garden beds in the spring.

Perhaps your garden has a poorly irrigated spot in need of some love. May we recommend the narrow leaf mountain mint? 🌿



### Zebra Swallowtail Butterfly *Eurytides Marcellus*

- Named for their zebra-like stripes
- Native to North America
- Fly from Late March to October
- Caterpillars feed on pawpaw trees, *Asimina*



## A New Nursery Comes on Line

By Dr. David Creech

We are pleased to report that a new in-ground nursery is in place at the SFA property on the northwest side of Nacogdoches on Stallings Drive. Previously known as the Science Research Center, this is now referred to as the Center for Applied Rural Research and Innovation. We have a little history at the place. In 2011, SFA Gardens planted 277 Mexico sugar maples, *Acer saccharum ssp. skutchii*, behind the main building in an open field. Ten years later, they were sold as 30-foot tall, 6-inch diameter trees to Environmental Design in Tomball. Over 200 large trees ended up in various locations around the state. After the place was emptied, we decided to repeat

the effort. We received a much-appreciated CARRI grant in 2022 that allowed us to establish the basic infrastructure for a new in-ground nursery. Devin Stage, SFA Gardens staff member, and Trevor Capper, student assistant, took the lead bringing the plots into good shape. We will be working with Gary Williams, Chris Dempsey and the Physical Plant to plant and care for over one mile of rows in this new tree nursery. After a few years when calipers reach 3-to-4-inches, many of the trees will find their way to the reforestation effort at SFA and to nearby civic projects with an interest in diversity, interesting genetics and the ability to thrive in Texas no matter what. 🌱

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## SFA Gardens Volunteer Lunch Bunch

Volunteers unite for our monthly Lunch Bunch gathering where we discuss volunteer opportunities and garden-minded topics. Meetings are the third Wednesday of the month in the Brundrett Conservation Education Building at noon. Bring your lunch and come ready to volunteer and learn.

Upcoming Lunch Bunches:

Feb. 15 – Pest management

March 15 – Plant sale preview

April 19 – Mulch, fungi and other fun things

May 17 – Turf grass problem-solving

# Upcoming Events

- FEB. 9** "Your Friendly Neighborhood CAS." Cindy Pruett with Appleby Community Farm 
- MAR. 9** "Making Scents of the Genus Narcissus." Greg Grant, county horticulturist, Smith County AgriLife Extension Service 
- MAR. 11** Grafting Workshop - Saturday seminar hosted by Dr. David Creech (Registration opens in early February)
- APR. 1-2** SFA Gardens Garden Gala Day Plant Sale
- APR. 13** "Finding the Ephemeral: Chasing Elusive Botanical Treasures of East Texas." Dawn Stover, study leader USDA NRCS East Texas Plant Materials Center 
- APR. 21** "Bugs, Bees, Butterflies and Blossoms" field investigations at SFA Gardens with Alan Sowards
- MAY 11** "Tips and Tricks for Maximizing Sustainable Space in Your Garden." Heather Kirk Ballard, assistant professor of consumer horticulture at Louisiana State University 
- JUN. 8** "Looking Back and Looking Forward: Our Recipe for Introducing New Plants that Make a Difference." Jim Berry with jBerry Nursery in Grand Saline 
- JUN. 17** Spectacular Science Saturday - Saturday seminar hosted by Dr. Alan Sowards for kids and an accompanying parent

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 Indicates the event is part of the Les and Theresa Reeves Lecture Series, which takes place at 7 p.m. the second Thursday of each month in the Brundrett Conservation Education Building.  
For more information, call (936) 468-4129, or email [sfagardens@sfasu.edu](mailto:sfagardens@sfasu.edu).



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“The love of gardening is a seed once  
sown that never dies”

— Gertude Jekyll

