SFA GARDENS ANNUAL REPORT

JAN – DEC 2024

SFA Gardens
2900 Raguet Street
Pineywoods Native Plant Center
Nacogdoches, TX 75965

TABLE OF CONTENTS Page

SFA GARDENS AS A UNIVERSITY AND REGIONAL RESOURCE

Established in 1985, SFA Gardens remains a recognized and valued Center within Stephen F. Austin State University (SFASU), Nacogdoches, Texas, USA. SFA Gardens is currently a multi-faceted public garden within the Department of Agriculture in the Arthur Temple College of Forestry and Agriculture (ATCOFA). SFA Gardens manages 138 acres on the 650-acre SFASU campus and has seven connected theme gardens.

1) Ten acres in the Mast Arboretum and Jim and Beth Kingham Children's Garden

2) Ten acres in the Ruby M. Mize Azalea Garden

3) Eight acres in the Gayla Mize Garden

4) Sixty acres SFA Recreational Trails and Gardens adjacent to the Gayla Mize Garden

5) Forty acres in the Pineywoods Native Plant Center

6) Two acres in the Jimmy Hinds Park.

6) Four acres, LaNana creek trail corridor, which is home to the LaNana creek trail and much of the garden's collection of Taxodium (bald cypress) germplasm. Runs 1 mile from Starr Avenue bridge at the south end of the campus north to the PNPC boundary on Austin Street.

7) Four acres, fruit research plots, located on the LaNana creek trail, east side of the Intramural field (Wilson/Starr)

SFA Gardens gains insight and goals from a Board of Advisors, with representatives from industry, academia and the community. The SFA Gardens is an umbrella organization that supports research and outreach projects in the gardens, city and the Gulf South. SFA Gardens is responsible for regional outreach and research projects including several externally funded studies and projects, including:

1) Since 2016, an ongoing Moody Gardens, Galveston Island, grant has funded a mission to find, plant and study "climate resilient trees, shrubs, palms and other ornamentals for a 21st century Galveston". The project has graduated five MS students and involved numerous undergraduates. Described later in this annual report.

2) Golden Kiwifruit, *Actinidia chinensis*, studies at SFASU, TAMU and farmer-cooperators continue. SFA Gardens is first-in-the-state to actually produce green or golden kiwifruit in Texas (2014). This interesting project has enjoyed external support since 2016, first by three sequential TDA/USDA grants that lasted five years, and now by more recent support of the KiwiKo brand of TopFruit in South Africa and a large grower in New Zealand (Ross Stevenson). With seven crops out of ten cropping years since 2014, there's room for optimism. The project has graduated one MS student,

involved numerous undergraduates and generated regional attention. This remains a collaboration with Dr. Tim Hartmann, Texas Agrilife Extension Specialist.

3) Two recent Texas Department of Agriculture/USDA Specialty Crop Block grants on the commercial potential of pineapple guava as an economic crop in Texas, is a research collaboration with TAMU's Dr. Tim Hartmann, Texas Agrilife.

4) A project funded by SFASU's Center for Applied Rural Research and Innovation (CARRI) in 2022 created a two-acre drip irrigated research plot for an in-ground tree and shrub nursery at the 12-acre CARRI headquarters on Stallings Drive, NW side of Nacogdoches. The mission of this work is to find, evaluate, propagate and promote climate resilient woody ornamental trees for Texas. We think the property has strong potential as a Center for Applied Studies in Horticulture (CASH), an idea that would generate much needed research, Horticulture/Forestry/Biology student involvement, publications, excitement and a good return on investment.

SFA Gardens continues to serve as a premier learning resource for students in Agriculture, Forestry, Horticulture, Environmental Science, Biology, Art and other disciplines. The Ina Brundrett Conservation Education Building (CEB) provides a fine environment for use as a classroom or lab. With the return of the Environmental Education program for Kids, we can report that thousands of our youngest citizens are getting hands on learning opportunities in the out of doors. Over many years the gardens have served as a teaching/training/doing resource for SFASU students of many majors. The advent of Covid was a terrible blow to environmental education programming nationwide. Many never returned. We are proud to be one of the survivors.

As a community and regional resource, the Nacogdoches Country Chamber of Commerce and the Convention and Visitors Bureau report that SFA Gardens remains a top query by phone or email from people looking for information on Nacogdoches. As a first, Trip Advisor recently listed the Ruby M. Mize Azalea Garden as the #1 destination in the city. Heaviest visitation is during the spring azalea bloom season (late March, early April) and the seasonal fall maple shows (early December, typically). The seven miles of asphalt trails are popular with hikers, runners and bicyclists.

It should be noted that, over many years, the SFA Gardens and SFA Physical Plant relationship has been and continues to be cohesive. We are partners on a mission for a greener SFA. With 138 acres under the SFA Gardens umbrella, our history of work with the Physical Plant Department to maintain the campus is relevant to the future of campus beautification. We salute the work and cooperative nature of John Branch, Director, Gary Williams, Grounds, and the arborist Chris Dempsey as well as all the Physical Plant personnel, whether it's in the mechanics shop, HVAC, plumbing, electricians, or custodial. The last few years has been challenging not only to SFA Gardens. The Physical Plant has seen a significant number of lost positions and cuts to operating budgets. In many ways, they remain the unsung heroes at this institution.

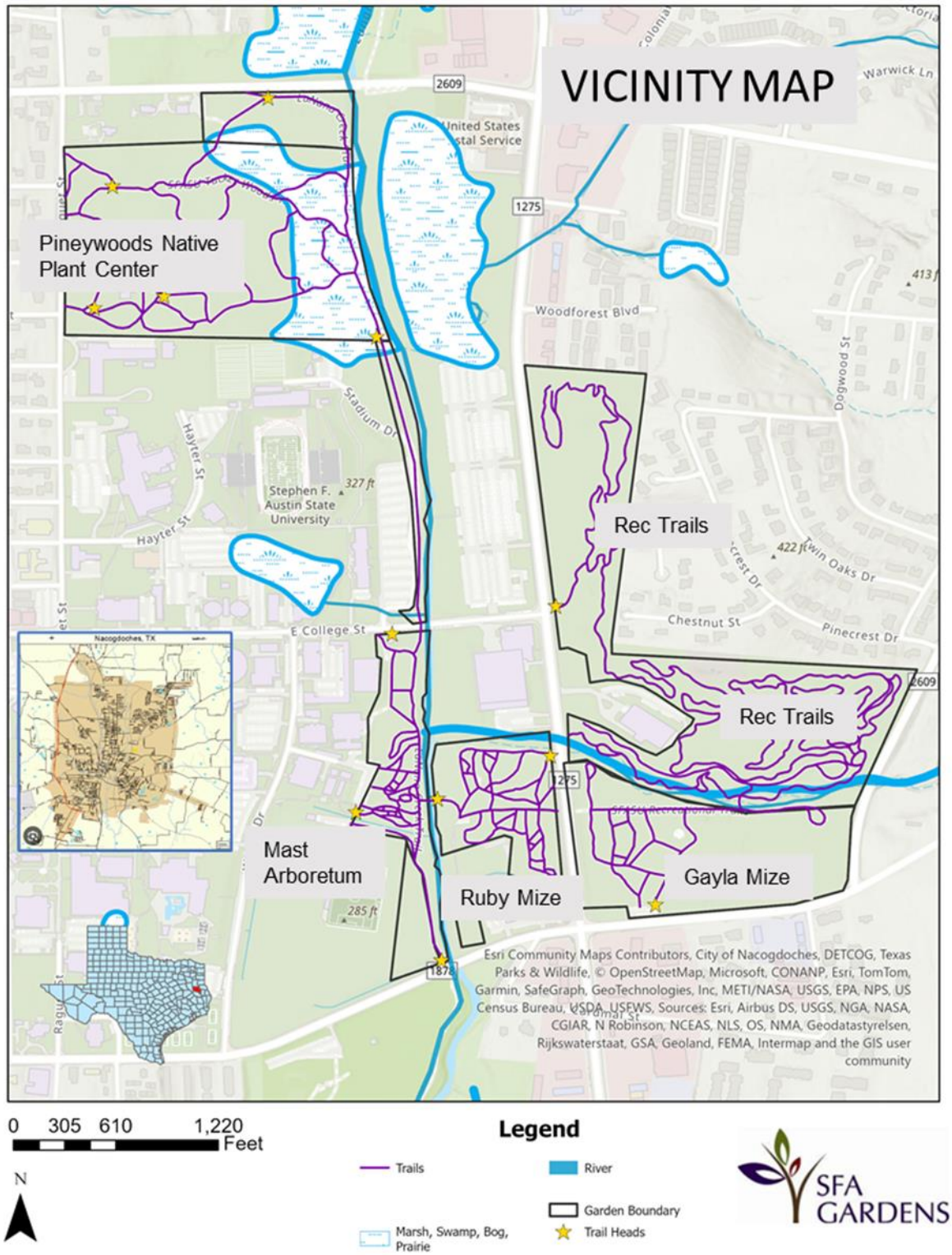


Fig. 1. SFA Gardens Vicinity map, 7 miles asphalt trails, trailheads

SFA HAS JOINED THE UNIVERSITY OF TEXAS SYSTEM

In 2024, SFASU joined the University of Texas System. There are changes everywhere. The reasons for a system change are beyond the scope of this report, of course, but I can report that the staff, volunteers and supporters of SFA Gardens look forward to new management and a return to brighter days. We are optimistic that the UT system will be looking under the hood of SFA Gardens and will conclude this is a successful university resource with far reaching impact.

STAFF CHANGES

In 2024, we endured a spate of staff changes. Peter Blanchette, Jhett Myers, Tammy Purser (1/2 time) and Dr. Andrew King (1/2 time) resigned to take other positions. On the plus side, we filled two positions in 2024. First, we were pleased that Elyce Rodewald returned out of retirement to take on a new ½ time position, "Assistant to the Director". Her duties primarily include monitoring accounts, managing receipts into the Concur system, and event details. Second, Kay Jenkins came on board as a full time Environmental Education Coordinator and her report illustrates that science education for kids and adults is prospering.

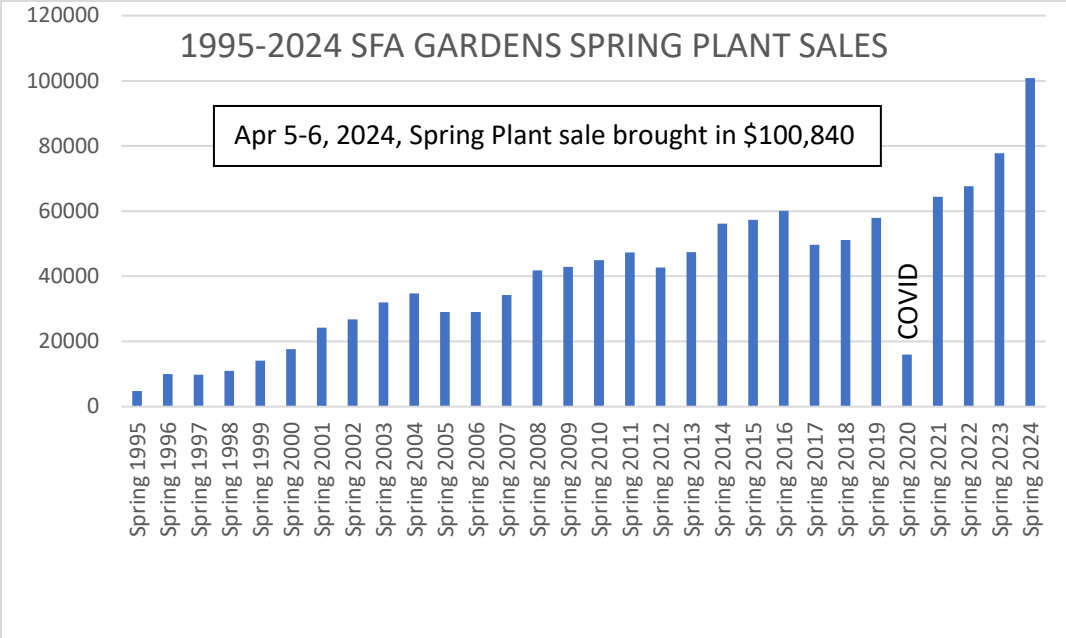
VOLUNTEERS RETURN TO THE FOLD

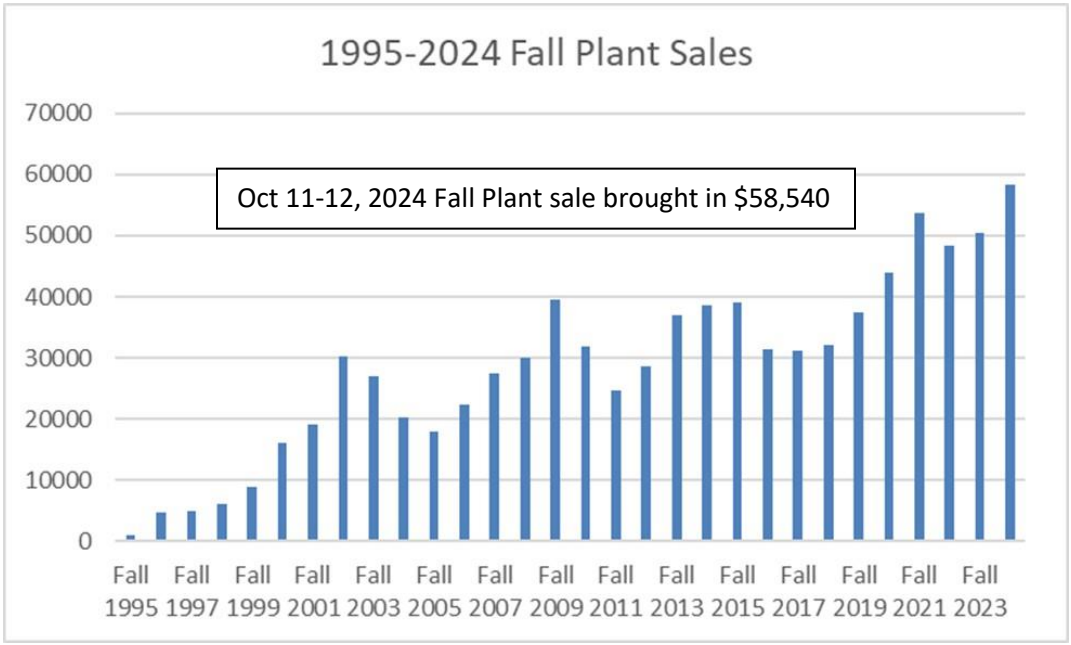
Historically, SFA Gardens has enjoyed a great corps of volunteers. That became history with the onset of the pandemic in March 2020. Just for a reference point pre-Covid, the total volunteer hours for the SFA Gardens set a record in 2019 with 2449.2 hours' worth $73,353.54. In 2020, we had 474 volunteer hours' worth $14,196.30, most of which came in January and February, 2020. The numbers in 2021 were dismal, but the situation has definitely improved in 2022 with 1,716 hours volunteer hours recorded worth $51,394.20. In 2023, Jordan reported 45 register volunteers with 1,967 volunteer hours' worth $58,912 dollars. In 2024, Jordan Cunningham reports 1,930 Volunteer hours' worth $57,804.

FISCAL AND PROGRAMMATIC HEALTH

The 2.3 state funded positions ($116,000) lost in 2020 have not returned to SFA Gardens. At the end of 2024, the eight salary lines at SFA Gardens are currently 28% state and 72% externally funded. In terms of total operating budget, state funding is 9% and external funding is 91%. Historically, the 2020 pandemic caused SFA Gardens staffing to drop to six staff, our state O and M support was reduced and the gardens fell into survival mode. The good news is that SFA Gardens has been able to recover via external funding. At the close of 2024, SFA Gardens enjoys eight staff (six at full time, two at half time) for a total of 7 FTE's. We can also report that our programming (seminars, workshops, plant sales, garden tours, volunteer hours, research projects and outreach) is back to numbers associated with pre-2020 levels.

SFA GARDENS PLANT SALES COME ROARING BACK TO PRE-COVID LEVELS





The two plant sales are a critical part of funding SFA Gardens staff salaries. In the graphs, the dip in the Spring 2020 plant sale income was due totally to the Covid19 shutdown. SFA Gardens countered with a hybrid plant sale in the Spring and Fall 2020 sales which worked but extending the plant sale over too many weeks was not efficient.

ENVIRONMENTAL EDUCATION PROGRAM MAKES A COMEBACK

The Ina Brundrett Conservation Education Building (CEB) at the PNPC is a perfect location for Environmental Education programs for kids, children and adults. We continue to proclaim the facility as a fine teaching example of environmentally sensitive methods of construction and operation. The building serves as an educational meeting space for children, SFA students, faculty, local citizens and those from afar. In 2019, the Ina Brundrett Conservation Education Building was the central location for 77 events, meetings, workshops, seminars and the Les Reeves Lecture series. In 2020, that didn't happen. The Covid pandemic shut all programming down and the CEB was soon turned into a classroom for classes. The CEB returned to SFA Gardens use in the Fall 2021. We are happy to report that in 2024, the CEB hosted 90 events.

One of the great success stories at SFA Gardens is Environmental Education. Elyce Rodewald was hired in 2001 as the very first SFA Environmental Education Programs Coordinator. In 2019, the program reached over 11,000 kids in a broad spectrum of programs for ages K-adult. The pandemic arrived in March, 2020, and the request to fill this state-funded position in the summer of 2020 was denied. That made sense then. After all, in 2020, the program essentially went 11,000 to zero. No kids, no program. In the summer 2021, schools began calling for programming and we proposed reopening the position. We learned the position had been swept. We fortunately found external funds to obtain Dr. Alan Sowards (recently retired from SFA) on ½ time and he did a remarkable job keeping the program connected with the gardens, education faculty at SFA and teachers at the local ISDs. Alan was a very fortunate hire, the perfect picture of right person, right place, right time. He was the life raft this important program needed then. Alan was retired, a College of Education professor. He enjoyed a long and successful career in outdoor education. He worked closely with Elyce Rodewald over many years. Alan returned to retirement in the end of 2023 to manage a new and thriving business in downtown Nacogdoches, Susu's Popcorn and Candy Café. Judging from the response, I predict it may go national! A very happy ending, indeed.

When Alan fully retired, we were lucky to have Kay Jenkins available as a full time hire A wonderful first year of grant support for 2024 from the George and Fay Young grant made it happen. Kay is an SFA graduate and enjoyed a remarkable career working in and with the state and federal agency world. She's a good grant writer, event planner and detail person. While environmental ed for kids remains a focus, she is also taking the adult education part of our work to a new level. While a request for a second year was denied, there was enough "program income" and some reserves in the SFA Gardens, to allow our program to fund this 2025 salary line. Kay Jenkins report later in this document says it all. Environmental Education for Kids is back on the table at SFA Gardens.

2024 LES REEVES LECTURE SERIES

Jan 11 – Dr. Andrew King, SFA Gardens Assistant Director, Nacogdoches, TX – “It’s a brand-new day at SFA Gardens, what’s new and what’s not.”

Feb 8 – Dr. Justin Scheiner, Texas AgriLife Viticulturist, TAMU, College Station, TX – “Making Mayhem with Muscadine Madness”

Mar 14 – Jordan Cunningham, SFA Gardens Technician, Nacogdoches, TX – “Plant Sale Preview – Plants you shouldn’t live without.”

April 11 – This planned presentation was cancelled at last moment: Dr. Yan Chen, LSU, Baton Rouge, LA – “Everything you wanted to know about Crape Myrtle Bark Scale but we’re afraid to ask.” Was replaced at last moment by Dr. Andrew King, Assist Director SFA Gardens,

May 9 – Greg Grant, Texas AgriLife Extension Smith County, Tyler, TX – “Pines, Pawpaws and Pocket Prairies.”

June 13 – Dawn Stover, USDA-NRCS – “Unleashing the Flower Fairy: The Evolution of the Southern Garden Girl” –

Jul 11 – Dr. Tina Cade, Horticulture Professor, Texas State University. “Plants and People – Gardens and Gardeners Making a Difference.”

Aug 8 – Steve Chamblee, retired Director of Horticulture, Longview Arboretum and Nature Center. “Am I tired or just retired? Gardening as a lifestyle and not a hobby.” -

Sep 12 – Whitney Griffin – Landscape software product manager - “The Art of Growing Plants Where Plants Don’t Want to Grow” –

Oct 10 – Cade Boyd & Lauren Kilpatrick – Cade is the Horticulture Equipment Specialist with Profile Products, Oberlin, OH – and Lauren is the technical trial manager at Syngenta Flowers, Oberlin, OH - "The Diverse World of Horticulture’s Supporting Industries"

Nov 14 - Dr. Jim Robbins, Little Rock, Arkansas – Retired University of Arkansas Extension Specialist – “Eleven Gardens in Ten Days – An England Adventure.”

Dec 12 – Dr. Dave Creech – SFA Gardens, Director – “Plants, Plans, and People: Why SFA Gardens is More Than Just an Attractive Nuisance.” –

The lecture series is once per month, usually the second Thursday. It is free. There’s a social before the presentations are 45 minutes to an hour. A popular plant raffle follows. The series was closed for more than a year but returned in the Fall of 2021, In 2024, attendance was 612 for the 12 events.

INA BRUNDRETT BUILDING EVENTS IN 2024

Elyce Rodewald reports that SFA Gardens hosted 90 events in the Ina Brundrett Conservation Education Building in 2024.

1/9/2024	Photography Club meeting
1/11/2024	Lecture Series
1/17/2024	Lunch Bunch Volunteer meeting
1/22/2024	Communications Council meeting
1/27/2024	Saturday Seminar-propagation
2/2/2024	Forestry meeting
2/6/2024	Photography Club meeting
2/8/2024	Lecture Series
2/10/2024	Student Leadership retreat
2/15/2024	SFA Gardens Board of Advisors meeting
2/17/2024	SFA Alumni Ambassador Assembly
2/21/2024	Lunch Bunch Volunteer meeting
3/5/2024	Photography Club meeting
3/5/2024	Bugs, Bees, Butterflies and Blossoms Training
3/7/2024	Bugs, Bees, Butterflies and Blossoms Training
3/14/2024	Lecture Series
3/15/2024	Garden Tour group
3/19/2024	Bugs, Bees, Butterflies and Blossoms Training
3/20/2024	Lunch Bunch Volunteer meeting
3/20/2024	Ag networking mixer
4/2/2024	Photography Club meeting
4/2/2024	ASA Conference
4/3/2024	ASA Conference
4/4/2024	ASA Conference
4/5/2024	Plant Sale
4/6/2024	Plant Sale
4/11/2024	Lecture Series
4/12/2024	Little Princess Tea Party
4/17/2024	Lunch Bunch Volunteer meeting
4/19/2024	Leadership SFA Graduation-Business Services
4/20/2024	ELED 3350-Interdisciplinary Arts in the Garden-Lauren Burrows
4/24/2024	Admissions-ETACRAO
4/25/2024	Student Government-end of year banquet
5/7/2024	Photography Club meeting
5/9/2024	SFA Gardens Board of Advisors meeting
5/9/2024	Lecture Series
5/11/2024	Family Fun Day-Botany Bliss
5/14/2024	UMC

5/15/2024	Lunch Bunch Volunteer meeting
5/16/2024	Chemistry Retreat
5/29/2024	Communications Council meeting
6/6/2024	Photography Club meeting
6/5/2024	ISA Workshop
6/6/2024	ISA Workshop
6/13/2014	Lecture Series
6/14/2024	SFA Gardens Staff Meeting
6/22/2024	Family Fun Day-Pollinator Posse
6/24/2024	SFA Pre-Law Academy
6/25/2024	CoSM Leadership Retreat
7/2/2024	Photography Club meeting
7/11/2024	Lecture Series
7/12/2024	Enrollment Management Leadership Retreat
8/1/2024	SFA Gardens Board of Advisors meeting
8/6/2024	Photography Club meeting
8/8/2024	Lecture Series
8/20/2024	DoMS retreat
8/21/2024	Lunch Bunch Volunteer meeting
9/3/2024	Photography Club meeting
9/11/2024	Training-Wild About Science
9/12/2024	Training-Wild About Science
9/12/2024	Lecture Series
9/16/2024	Learning Excursions
9/19/2024	Fine Arts for Teachers-Elem Ed
9/21/2024	Delta Zeta Family Day
9/23/2024	Training-Wild About Science
2/25/2024	Training-Wild About Science
2/26/2024	Training-Wild About Science
9/27/2024	Fruit Field Day
10/1/2024	Photography Club meeting
10/2/2024	Training-Wild About Science
10/3/2024	Training-Wild About Science
10/10/2024	Lecture Series
10/11/2024	Plant Sale
10/12/2024	Plant Sale
10/15/2024	CARRI Showcase
10/16/2024	Lunch Bunch Volunteer meeting
10/18/2024	Learning Excursions
10/25/2024	Learning Excursions
10/26/2024	Saturday Seminar-gorgeous gourds
11/7/2024	SFA Gardens Board of Advisors meeting
11/12/2025	Photography Club meeting

12/3/2024 Learning Excursions
12/4/2024 Admissions Retreat
12/6/2024 Wild About Woody Ornamentals
12/7/2024 Saturday Seminar-Deck the Halls
12/10/2024 Marketing Holiday Party
12/12/2024 Lecture Series
12/13/2024 ATCOFA Holiday Potluck
12/18/2024 Lunch Bunch Volunteer meeting

MICKEY ELLIOTT FAMILY FOUNDATION GIFT

In 2019, the Micky Elliott Family Foundation awarded the SFA Gardens a gift that saved the garden. We hired two new staff, Thomas Dimmitt and Devin Stage just prior to the mid-March 2020 closing of the University. Both are still with the gardens making a big difference. Thomas and Devin have provided the absolutely critical on the ground staff dedicated to new garden projects and landscape maintenance (weed control, planting, mulching, fertilizing, pruning, pest management and irrigation). Thomas's territory of responsibility is the SFA Mast Arboretum and Devin is in charge of keeping the Ruby Mize Azalea Garden in tip top shape. Both have gladly taken on other duties as time allowed. Devin has been critical to much of our field nursery work at the CARRI center and is our first certified arborist. Thomas has taken a leadership role in our goal to refurbish 24 bridges and boardwalks in the gardens and has brought in some significant collaborations. In the history of this garden, this award will be recognized as one that literally allowed the garden to survive. Without it, there's no doubt the gardens would have lost even the most modest level of maintenance we now enjoy. This gift will be ongoing based on achieving our deliverables. We intend to do just that.

GARDEN COLLECTIONS

What still separates SFA Gardens from so many university gardens is the scale of work with numerous taxa, the sheer diversity of the collection. A lot of that has to do with age of the garden, now at 40 years old. In the tree world, this garden was blessed with connections who enthusiastically shared seed or cuttings. When this garden was young and just beginning, it never ceased to amaze me how kind our plant world is. Share is a verb. As a result of that era, the gardens are now home to a treasure trove of interesting woody trees rarely seen. In the final analysis, the reason for the success of SFA Gardens is simple. We have a long history of connecting and developing friendships with other arboretums and botanical Gardens across the nation, and with other academic institutions, nurserymen and plant enthusiasts. When this garden was young, it was a time when academics, nurserymen, horticulture enthusiasts were quick to share plant material . . . and appreciated it when they learned of success or failure.

Japanese maples and other Acer species, camellias and azaleas are, by any yardstick, very large collections in the gardens. The number of *Acer palmatum* and *A. japonicum* cultivars exceeds 400. The gardens are also home to an interesting collection of other

Asian species that have stood the test of time, many rarely encountered. Since the 1980s, the SFA Gardens work with the Mexico mountain sugar maple, *Acer skutchii*, has allowed this fast growing, drought and alkalinity tolerant species to make an impression in the industry. The original tree in the Mast Arboretum, next to the SFA Plantery headhouse, north side, was planted in mid 1980s. The species has proven itself for over forty years at SFA Gardens and parts beyond. It's strong performance as a sugar maple in central Texas is an eyeopener to many. In our region, the tree doesn't color up until it makes seed. Then, the leaves can be varying shades of red, yellow and orange.

The SFA Gardens bald cypress evaluation and improvement program has a significant history – built on a foundation of diversity in the genus Taxodium. One clone, T406, aka 'LaNana' is in high demand simply because it ticks all the boxes for a good landscape tree. Derived as an acquisition from friend and colleague at Nanjing Forestry University as a seedling selection of a batch of bald X Montezuma cross. As the result of the Montezuma genetics, it does not produce knees, which are a big headache for the landscape maintenance world. 'LaNana' is alkaline tolerant, fast growing and resistant to needle blight, a more than common mild malady of Taxodium in the south, particularly when trees are young. 'LaNana' starts up early in the spring with light green foliage that is remarkably frost tolerant. Described here:

https://dcreechsite.com/2017/01/03/taxodium-x-lanana-born-in-america-and-mexico-improved-in-china/

The SFA Gardens collection of Mexico oaks is recognized in the South as extensive. A large *Quercus rysophylla* is a record tree in the state, in competition with another big tree at Trinity University. *Q. canbyi*, *Q. polymorpha* and a host of other Mexico species call SFA Gardens home. We have several interesting clones of *Q. virginiana*, live oak, worthy of multiplying. The PNPC now enjoys a well-established "golden live oak" via Albert Durio in Louisiana and we hope to multiply and share this interesting clone. It is fully canary yellow for a few weeks in the spring before greening up. Who wouldn't want that?

MOODY GARDENS PROJECT

It's a brand-new day for the SFA Gardens project at Moody Gardens, a long-term research effort to find "climate resilient plants for a 21st century Galveston Island". The 2016-2019 report is available on line:

https://www.sfasu.edu/docs/sfa-gardens/projects-final-report-for-moody-foundation-aug-2019.pdf

We've long had a goal to more effectively educate our youngest citizens with the research effort we now enjoy on the island. We are pleased to report that in 2024, we were able to create a collaboration with LSU's 'Coastal Roots' program. Dr. Ed Bush directs that which has twenty years of educating and involving school children in coastal remediation projects. In 2023, we began an initiative to incorporate a 'Coastal Roots'

program into our work at Moody Gardens. With a subcontract to LSU, we can now see the connection developing between SFA Gardens, LSU and Moody Gardens that will strengthen the environmental education program for Kids.

This project has enough funding to last until September 2025 and we will be submitting a proposal for 2025-2028 early in 2025. A 2020-2024 Moody Gardens Progress Report will be on line in early 2025.

TREE NURSERY AT THE CARRI HEADQUARTERS

We are pleased to report that a new in-ground nursery is in place at the SFASU property on the northwest side of Nacogdoches on Stallings Drive. Previously known as the Science Research Center, this property is now referred to as the headquarters of the Center for Applied Rural Research and Innovation (CARRI). SFA Gardens has a history on this property. In 2010, Dr. Kim Childs, Dean of Science and Math, gave approval for SFA Gardens to use a 2-acre portion of the property and we planted 277 Mexico sugar maples, *Acer saccharum* ssp. *skutchii*, behind the main building in an open field. These grew well and we're the basis of several interesting research projects. Most of the trees were sold a couple of years ago as 30' tall, 6" diameter trees to Environmental Design, Tomball, Texas, which generated about $70,000. Over 200 large trees ended up in various locations around the state, mostly in Walsh City near Fort Worth and in locations near Katy. They are still being tracked. After the place was emptied, we want to repeat that effort with a focus on evaluating a wider range of potential tree varieties in a full sun location, drip irrigated and just happening to have a red clay soil that is very good for tree spade efforts. The root balls hold together well. We received a much-appreciated grant in 2022 from CARRI that allowed us to establish the basic infrastructure for a new in-ground nursery. SFA Gardens staff have brought the research plot back into action. Thomas Dimmitt and Devin Stage, SFA Gardens staff, have taken the lead to bring the field back into good shape. SFA Gardens will be working with Gary Williams, Chris Dempsey and the Physical Plant to plant and care for over one mile of rows of this new tree nursery. After a few years when tree calipers reach three to four inches, many of the trees will find their way to the reforestation effort at SFASU and to nearby civic projects with an interest in diversity. This project will focus on interesting genetics, primarily testing trees for their ability to thrive in Texas under challenging conditions.

As the result of the promise of skutch maple and a good seed crop, Andrew King initiated a germination study that will be presented in 2025 at the Southern Region of the American Society for Horticultural Science. The abstract below summarizes the work:

Influence of stratification treatments on germination of *Acer skutchii* seed from seven different genotypes. Andrew R. King[1]*, David L. Creech[2], [1]1710 FM 3053 N, Texas A&M AgriLife Research and Extension Center, Overton, TX 75684, [2]SFA Gardens, 2900 Raguet St., Nacogdoches, TX 75965. (Andrew.king@ag.tamu.edu)

Acer skutchii (Mexico mountain sugar maple) is a deciduous maple species native to Guatemala and the states of Tamaulipas and Chiapas in Mexico. When grown in the U.S. the species has exhibited increased heat, drought and alkalinity tolerance, though this has been scarcely documented in the literature. Successful propagation of *A. skutchii* has been done by stem cuttings and seed, however, few results have been published. Reports of their fruiting structures (samaroid schizocarps), which are comprised of two winged achenes, often having one or both seed undeveloped or aborted are common. Objectives of the current research were to observe the influence of genotype on seed fill percentage and the influence of genotype and stratification treatment on germination percentage and rate of *A. skutchii* seed. Seed from each of the genotypes were randomly assigned to a stratification treatment (control, GA_3, 13 d, 26 d or 39 d cold stratification). On 13 Nov 2023, seed were sown 20 per container with three replicates of each treatment arranged in a CRD. Significant differences ($P \leq 0.001$) in the mean number of viable seed per schizocarp were observed among the seven genotypes, with T1 producing a mean of 1.74 and H1 and H2 producing 0.74 and 0.80, respectively. An interaction among genotype and stratification treatment ($P \leq 0.001$) was observed for mean germination percentage. Seed from the genotype H2 that were cold stratified for 26 d germinated at 70% while many seed in the study that were not stratified or treated with GA_3 did not germinate or germinated at near 0%. Germination rates (d to initial germination and d to 50% germination) followed a similar significant pattern ($P=0.0173$ and 0.0253, respectively) as germination percentage, with the genotypes T1, T2 and H2 that had been stratified for at least 13 d germinating before other treatments and genotypes. A main effect of stratification treatment ($P \leq 0.001$) was significant for the measurement of d to final germination percentage with all of the cold stratification treatments yielding seed that germinated to the maximum percentages observed in this study 10 d before those in the control and GA_3 treatments. Overall, genetic differences were observed in seed fill percentages, germination percentages and rates. A short cold stratification treatment also increased the germination percentages and rates observed in this study.

ANNUAL TRIALS AT THE CARRI CENTER

Dr. Andrew King received a CARRI grant in 2024 to establish an annuals trial. While weather related issues prevented a timely start, a field day July 11, 2024 was colorful and well attended. The following is an abstract for a paper to be presented at the Southern Region meeting of the American Society for Horticulture Science (ASHS).:

Andrew R. King[1] and David L. Creech[2]. **Deep East Texas Annual & Perennial Plant Trial.** [1]Assistant Professor, Texas AgriLife Research, Overton, TX and [2]Director, SFA Gardens, Nacogdoches, TX

In June of 2024 the inaugural Deep East Texas Annual & Perennial Plant Trial (DETAPPT) was installed in Nacogdoches, TX. These trials served the east Texas green industry, which is comprised of nursery and greenhouse operations in approximately 36 counties that sold $1.6 billion in products in 2019 and represented

over $2 billion in value added to the economy. Growers and homeowners in this area have depended on local bedding plant trials to keep them informed about the latest releases of annual and perennial plants and their suitability for east Texas. Statewide information is often tailored for the metro regions (DFW, Houston, Austin, San Antonio), all of which have significantly different soils and weather patterns than gardeners in east Texas face. The DETAPPT is an important tool for east Texas horticulturists in terms of expanding the plant palette appropriately based upon empirical evidence. In October of 2023, requests were made to horticultural genetics companies throughout the U.S. for trialing materials consisting of annual and herbaceous perennial bedding plants. Companies were encouraged to send plant material for production by seed, unrooted cutting (URC) or plugs. Companies that participated included BallFlora, Danziger, Dummen Orange, PanAmerican Seed and Syngenta Flowers. Seed were sown from 10 January to 24 January, URCs were stuck 15 February to 29 February and plugs were accepted through 31 March. All propagules were then transplanted into 395mL black plastic containers (8.89 cm x 8.89cm x 8.89cm) in a soilless substrate comprised of aged pine bark, Canadian sphagnum peat moss, hydrafiber and perlite (Jolly Gardener HFC/B, Oldcastle Lawn and Garden). Plants were watered as needed and fertilized with water-soluble fertilizer (Peters 20-10-20, ICL Group) at a rate of 250 mg/L-1 twice weekly. Plants were grown in a single poly greenhouse and moved to a shade house on 1 May for environmental acclimation. Field planting was conducted from 13 June to 18 June. Planting of each cultivar consisted of nine plants in a 3x3 pattern in 0.6m of row with 0.6m of row between each cultivar planting. A DETAPPT Field Day was held on 11 July. Many interested community members, Master Gardeners, and industry members were in attendance to observe the trials. Attendees were asked to “vote” for their favorite entry by placing a flag next to that plant. By counting these flags, “winners” of the trials were determined. Six cultivars received > 2 votes. The most popular cultivar was the ‘Fun House Peach Melba’ Petunia followed by Petunias called ‘Fun House Amethyst Sunshine’ and ‘Dekko Sorbet’ and the ‘Main Street Beale Street’ Coleus. Finally, ‘Lanai Scarlet’ Verbena and ‘Painted Love Purple’ Petunia rounded out the most popular selections at the DETAPPT field day.

FRUIT RESEARCH AT SFA GARDENS

While most of the garden is dedicated to woody and herbaceous ornamentals, a significant fruit research platform is in place that is appreciated by our fruit specializing colleagues for its diversity and breadth. The program collaborates with faculty and staff in the land grant institutions in Texas, Georgia, Florida, Mississippi, Alabama, Louisiana and Arkansas. See images in the pictorial portion of this annual report.

Blueberries

Since 1978, the SFA Horticulture program has enjoyed a history of blueberry research. We are well connected with the small fruit researchers and extension faculty across the Gulf South. The SFA Gardens blueberry germplasm evaluation plot is on the north end of the Pineywoods Native Plant Center and the effort includes over 114 cultivars and advanced selections, typically three of each. A number of varieties have suffered after

the February 2021 epic freeze. A big addition in 2025 will be planting a collection of native Vaccinium species of known Texas and Louisiana provenance to serve as a germplasm repository for the genus.

Muscadine Grapes

A muscadine grape vineyard was established in Jimmy Hinds Park in 2014 and includes over 72 cultivars and advanced selections. The field is surrounded by a deer proof net fence and drip irrigation is on hand, although the vines (now eight years old) are quite healthy in this spot along LaNana creek. We are using a three-wire system and the grapes have been quite productive. A collaboration with Dr. Stephen Stringer, USDA plant breeder, has resulted in the release of one variety and a publication has been submitted. We also collaborate with Dr. Justin Scheiner, Texas Agrilife, state viticulturist. We are optimistic about some new selection material that brings seedless muscadines into the mix. It is our belief that the opportunities for disease-free native grapes are strong. Our evaluation program involves a yield estimate on a 1-10 scale, average berry size of a sample of 50, ranking of the scar when picked, whether it's dry or wet, skin thickness and a taste ranking. Dr. Scheiner at TAMU will be taking on the laboratory work to characterize the fruits brix, acidity and nutrient parameters. This year's crop was harvested by two PYO one day events with SFA Gardens volunteers and Jordan manning the booth at the entrance. The crowd was much bigger than we anticipated with folks parking at a nearby Kroger's parking lot to make their way here. A big surprise late in 2024 was being included in a Garden Delights muscadine improvement program that will include 13 new seedless clones, a huge breakthrough for the potential of this crop in the marketplace.

Figs

A fig variety planting was established in 2014 that is now over 100 varieties. To add to the excitement, in 2024 we received and planted about sixty new accessions via USDA/ARS collaboration – they are all new to the research plot. We are working closely with Dr. Tim Hartmann, Texas Agrilife, College Station, Texas. Tim has a duplicate planting at TAMU and we share our genetics. The freeze events in February 2021 and late December 2022 were damaging, taking good sized figs to the ground. They have rebounded well in the last two year and hopefully 2025 will be a good crop year.

Kiwifruit

A kiwifruit project was supported by Texas Department of Agriculture, USDA Specialty Crop Block Grant for three rounds. This external funding ended in December 2021 but I can report the project survives via external funding. While we have a foundation of promising varieties, we are also evaluating new genetics from the breeding program at Changsha, China. We are collaborating with a number of far-flung kiwifruit businesses. We work primarily with Nick Steyn, TopFruit, South Africa and Ross Stevenson, kiwifruit

grower/businessman, Auckland, NZ. The first Kiwifruit varietal trial was planted in 2010 at SFA. This resulted in a first-ever-in-Texas crop of golden kiwifruit, *Actinidia chinensis*, in 2014. Our plots have enjoyed seven good to average crops out of the last ten years. This project is a collaboration with Dr. Tim Hartmann, Texas Agrilife Extension Specialist, College Station, Texas. On March 23, 2023, SFA endured a dip to 27^{o}F after a month and half of warm temperatures. Open flowers, small premature fruit and foliage shoots were burned back. We lost the crop. The vines regrew well from the trunks and branches. Judging from consumer evaluations in past years, the golden kiwifruit receives high marks in taste, texture and an edible skin. Pests have not been an issue but with several new insects on the horizon that may change in the future. Vine vigor has been as good as anywhere in the world. Still, the last three years have presented climate challenges of epic proportion, including, 1) hard freeze damage on young plants, older plants seem quite unfazed into single digits, 2) late spring frosts with open flowers is an issue; we lost the crop in 2023 to a late freeze, 3) Variety selection, 4) Pollination issues; kiwifruit are either male flowers that provide pollen nearby to kiwifruit female flowers, we have one proven performer for early season,CK3, and need additional males to cover mid and late flowering golden kiwifruit varieties and selections under test, 5) tolerance to alkalinity,). It is encouraging that most older vines survived the Feb 2021 -4^{o}F record hard freeze. The summer droughts in 2022 and 2023 have been record breaking and intense. A late December 24, 2022 freeze to 9^{o}F was a shock on plants and some were damaged. The recent (Jan 15, 2024) freeze saw temperatures fall to 9F with over 70 hrs. below freezing. Conclusion: the last three years of climate challenges have been intense. With three farmer cooperators working on this project, we will soon have a better understanding of the commercial possibilities of green and gold kiwifruit in the Gulf South.

Pineapple Guava

A project, “Pineapple Guava, a Potential Fruit Crop for Texas,” is currently supported by a Texas Department of Agriculture/USDA’s Specialty Crop Block Grants. The co-PI is Dr. Tim Hartmann, TAMU, College Station, TX. SFA Gardens has a long history with this species, *Acca sellowiana*, but have only recently begun to evaluate varieties and production strategies.

Abstract: Pineapple guava, *Acca sellowiana*, is a South American Fruit grown worldwide where conditions allow. Formerly known as *Feijoa sellowiana*, this small tree has been in landscape use across the South for a century. It appreciates cross pollination and a single tree is not likely to fruit. Fruit made in the south is often inferior in size and flavor. New cultivars in China, New Zealand, Greece and Italy suggest another look at this interesting fruit as a part of the local market. The fruit has a reputation for poor shipping and storage qualities, thus is restricted to fast delivery to market and local sales. We have had Pineapple guava at SFA Gardens for many years and it’s a reliable shrubby ornamental tree with attractive and edible flowers. However, fruit from most seedling trees is small and inferior, typical of most found in southern landscapes. Only with improved varieties and improved genetics can we find large sweet fruit of good quality for the market. SFA Gardens is partnering with Texas

A&M AgriLife Extension (Dr. Tim Hartmann) to continue developing pineapple guava into a new commercial crop for the Texas specialty fruit crop and nursery industry. A unique attribute of this project is the acquisition of new varieties from contacts previously made by Dave Creech and Tim Hartmann in this country and in New Zealand. The project goals are: 1) collect yield and fruit data from extensive trialing of over 40 varieties at two sites to identify best-performing material; 2) develop more efficient propagation techniques to make these varieties commercially available; 3) develop a comprehensive consumer preference study to identify the most marketable varieties; 4) promote the project through field days, conferences and social media. This project is located at the fruit plots that lie on the eastern side of the intramural field, west side of LaNana Creek. Because of the success of a few plants at our Moody Gardens, Galveston Island research plot, we have increased that planting to over 40 trees. While there's great existing homeowner potential, this project will soon determine the commercial opportunity with potential new fruit.

JIMMY HINDS PARK

This special 2-acre stretch of LaNana Creek bottomland lies at the North end of the Pineywoods Native Plant Center, adjacent to Austin Street. This two-acre patch was a gift by Barbara Finney to the University, and she funded the garden development over a good number of years. She passed away July 2, 2020. Barbara enjoyed a sharp wit and was never prone to mince words. She is survived by her daughter Vicki Chamberlain and sister Patricia Spearman. I met Barbara many years ago and she had much to do with spreading horticultural cheer here and at other institutions of higher learning. Her father was the very first Agriculture Instructor at SFA over 100 years ago. The Park is home to a fine muscadine vineyard which will be seeing an expansion and a transfusion of new varieties in 2025. The Park is also home to a collection of Taxodium (Baldcypress) cultivars which includes the popular 72'-wide treehenge-like circle of weeping bald cypress, 'Cascade Falls'. We intend to capitalize on the sunlight and rich bottomland soils of this special spot along LaNana creek.

CLIMATE

The last four years in Texas has seen epic climate challenges. Nacogdoches was not spared. First was the never-seen-before impact of the record mid-February 2021 -4^{o}F record hard freeze. Damage was heavy because Winter storm Uri was accompanied with ice and snow; trees fell and large branches from above wreaked havoc in the gardens below. Second was the record-breaking heat and droughts of summer 2022 and 2023. 3) a Dec 23, 2022, 9^{o}F event was preceded by a mild November and much of December; damage was heavy. Fourth, a May 11, 2023 flood was a tie for the worst flood in the history of the gardens. The flood topped Starr Avenue and was closed for a few hours. Fifth, a late freeze March 23, 2023 to 27F caught many plants in bloom, fruit or foliage and damage was heavy. Sixth, the summer of 2023 is now accepted as a record heat/drought event in our region. Seventh, a late freeze in March 2024 was preceded by warm weather and advanced blooms were killed. Eighth, two floods, May and June 2024, one of which was epic, were very hard on the gardens.

It's all about terminology. A new term, "climate resiliency" is making a mark to describe the character of urban trees and shrubs we should be planting. Everyone has seen the predictions of melting ice, rising seas, and violent storms punctuated by long stretches of punishing heats and droughts never seen before. In the Pineywoods, it's apparent we need more drought and heat tolerance, more salt and alkalinity tolerance in the plant materials we use, and, judging from recent events, we need our urban landscapes to tolerate low temperatures we've never seen before.

GOALS

With the system change and new University management, the SFA Gardens has been asked by the Dean to provide a "wish list" for future needs. In order of priorities, this is the consensus of the staff:

1) The SFA Gardens staff, Board of Advisors, and Volunteer Corps recommend that the SFA Gardens resource stay intact as one 138-acre unit on the SFASU campus under ATCOFA.

2) Return two state salary lines lost in March 2020 (the Environmental Education Coordinator position and the SFA Gardens Research Associate position). Estimated need: $120,000 per year

3) Returning the SFA Gardens state o and m line back to the level enjoyed in 2020: Estimated $40,000 per year.

4) Trail bridges, boardwalks, signage and interpretation. After thirty years, the 26 boardwalks and bridges, signage panels and plant labels need replacing. Estimated at $360,000. We have a proposal in the works that will be submitted Feb 1, 2025 for a TP&W Recreational Trails Grant that may handle this need.

5) For the SFA Gardens Fruit and Vegetable Production work and for the new tree/shrub/herbaceous research platform at the CARRI headquarters on Stallings: 2445S Schaffer wheel loader, 26 HP Kubota diesel, Multi high flow hydraulics, open ROPS, lifting capacity 5335 lbs; and equipment: HFB-60 Haugen dirt bucket, HRDG-60 Haugen Rod Grapple Bucket, HTR36X6-CC Haugen trencher, AD300-12 Haugen post hole auger, 12" Hauger auger bit, Optimal 900 Tree spade, and HST52 Haugen rotary tiller. Total cost with equipment: $110,000

6) Environmental Education start up to create a "Children's Garden" on the PNPC property with a small attractive "tiny home" 12' X 14' storage building (SFA engineered and built) with porch, and an associated garden of raised beds and cedar rail fence, approximately 10,000 square feet. Material and Supplies (consumables) - annual (seed, plants, live animals – live animal habitats; ie. butterflies, decomposer, aquatic macro-organisms). $50,000.

7) We are seeking University permission to create a Center for Applied Studies in Horticulture (CASH) at the 12-acre university property on Stallings. Currently the property is the headquarters of the Center for Applied Rural Research and Innovation (CARRI), an SFASU initiative. SFA Gardens has enjoyed a tree nursery presence there since 2010. We are encouraged to have external support to move these projects forward.

CONCLUSIONS

2024 has been a transitional year. This proud university in the Pineywoods is moving from a standalone state university to part of the University of Texas System. There are changes everywhere and no one really knows how this university will evolve in the years ahead. We look forward to increasing enrollment and brighter days at SFASU. SFA Gardens will be forty years old in 2025 and over all the years this special garden has grown, prospered and taken on a character all its own. While the last four years have been truly difficult with Covid, climate and budget surprises, the gardens are part of the fabric of this institution of higher learning and helps make this oldest town in Texas truly special. It remains one of the jewels on the LaNana creek necklace. We're here to see that continues.

SFA Gardens communicates our mission, events and contributions by a wide variety of outlets.

Four quarterly newsletters to membership and our past annual reports can be found here: https://www.sfasu.edu/academics/colleges/forestry-agriculture/research-outreach/sfa-gardens/about/newsletter-annual-reports

SFA GARDENS STAFF REPORTS DEC 2024

We're here to make a difference . . .

December 2024 SFA Gardens staff photo. Left to right: Thomas Dimmitt, Kay Jenkins, Elyce Rodewald, Dave Creech, Jonathan Carrillo, Devin Stage, Jordan Cunningham and Duke Pittman.

DR. DAVID CREECH 2024

Director, SFA Gardens, ½ time.

Jan 10-12, 2024. SFA Gardens hosts the Texas Association of Botanical Gardens and Arboreta. Attended by 11 Texas gardens. 41 attendees

Jan 17, 2024. KTRE interview on impact of the Jan 15-17 hard freeze: https://www.kltv.com/2024/01/17/sfa-gardens-begin-recovery-after-hard-freeze/?outputType=amp

Jan 17, 2024. Creech, David. Planting trees right. SFA Gardens Lunch Bunch, 6 attendees.

January 20, 2024. Creech, David. 2024. Climate resilient ornamentals for a 21st Century, Texas. Presentation to the Association of Water Board Directors Winter Conference, Dallas, TX. 211 attendees.

Feb 8, 2024. Creech, David. The Natives are Restless. Master Gardener training program, three hours, Montgomery County Texas Agrilife, Conroe, Texas. 86 attendees.

Feb 9, 2024. Creech, David. Growing Blueberries in the Pineywoods. Presentation to the Smith County Texas Agrilife Fruit and Vegetable annual conference, Tyler Texas. 246 attendees.

Mar 12, 2024. Creech, David. – "Climate Resilient Ornamentals for a 21st century Arkansas." A presentation to the Arkansas Green Industry Association (ARGIA) annual conference. 93 attendees

Creech, David. March/April 2024. Spring-Flowering Trees. **Texas Gardener** Vol. XLIII (3): 30-33.

April 9-12, 2024. Visit by premier maple nurserymen Tim and Matt Nichols of Mr. Maple fame, a leading North Carolina mail order maple nursery in the USA with an emphasis on Japanese maple cultivars. Videos at SFA Gardens for their podcast.

April 17, 2024. Creech, David. Presentation to the Nottingham Forest Garden Club, Houston, TX. "Climate Proven Azaleas for the Gulf South." 56 in attendance.

Blanchard P., E. Bush, D. Creech. April 2024. Coastal Roots Program: Exhibitor at the Party for the Planet. Moody Gardens, Galveston, Texas.

Creech, David. May/June 2024. The Nativar Debate. **Texas Gardener** Vol XLIII: 22-25.

June 17, 2024. Field trip by the Texas Chapter of the Azalea Society for America to JBerry Nursery, Gran Saline, TX. 6 attendees.

Creech, David. July/August 2024. Planning and Planting for Epic Heat, Drought and Freezes. **Texas Gardener** Vol. XLIII (5): 22-24.

Creech, David. Sept/Oct 2024. Evaluating Landscape Plants for a 21st Century Gulf Coast. **Texas Gardener** Vol XLIII (6): 34-34-37.

Creech, David. November/December 2024. Hollies in the Landscape. **Texas Gardener** Vol XLIV (1): 30-33.

Creech, David. Apr 24, 2024. Participated in Dr. Dave Kulhavy's Urban Forestry class discussion on a UT Tyler 20-acre project.

As the result of our collaboration since 1994 and numerous exhanges, the following paper is presented: Yan Lu [1 2], Shuqing Zhang [1 2 3], Peng Xiang [1 2 3], Yunlong Yin [1 2], Chaoguang Yu [1 2], Jianfeng Hua [1 2], Qin Shi [1 2], Tingting Chen [1 2], Zhidong Zhou [1 2], Wanwen Yu [3], David L Creech [4], Zhiguo Lu [1 2]. 2024. Integrated small RNA, transcriptome and physiological approaches provide insight into Taxodium hybrid 'Zhongshanshan' roots in acclimation to prolonged flooding. **Tree Physiology 44(4);** DOI: 10.1093/treephys/tape032; Author affiliations: [1]Jiangsu Key Laboratory for the Research and Utilization of Plant Resources, Institute of Botany, Jiangsu Province and Chinese Academy of Sciences, No. 1 Qianhu Houcun, Zhongshanmen Wai, Nanjing 210014, China; [2]Nanjing Botanical Garden Mem. Sun Yat-Sen, No. 1 Qianhu Houcun, Zhongshanmen Wai, Nanjing 210014, China. [3]Co-Innovation Center for the Sustainable Forestry in Southern China, Nanjing Forestry University, 159 Longpan Road, Nanjing 210037, China. [4]Department of Agriculture, Arthur Temple College of Forestry and Agriculture, Stephen F. Austin State University, Nacogdoches, TX 75962-3000, USA. PMID: 38498333

May 17, 2024. Hundreds of elementary students attend SFA Gardens' annual Bugs, Bees, Butterflies and Blossoms. https://www.newsbreakapp.com/n/0t7dxnQ5?pd=0EmCLWFO&lang=en_US&s=i16&_f=app_share&send_time=1716067238

June 6, 2024. Creech, David. Native Alternatives in the Landscape. 1 hour presentation, International Society for Arboriculture, Pruning and Training Workshop, at the Conservation Education Building, SFASU, Nacogdoches, TX. 36 participants.

July 29, 2024. Toured our new President Neal Weaver and wife Kristi for 1 hr, 20 minutes through SFA Gardens property.

Creech, David. Aug 9, 2024. "Zero Irrigation Trees and Shrubs for the Pineywoods. Presentation to the Smith County Master Gardeners, Tyler, Texas. 40 attendees.

Creech, David. Aug 14, 2024. Climate Resilient Ornamentals for a 21st Century Texas – Reducing Water Use with the Right Species. Texas Nursery and Landscape Association Conference and Convention, San Antonio, Texas. 92 attendees.

Facilitated Horticulture student Lee Hayden internship to New Zealand in Aug 2024. Lee was exposed to the kiwifruit industry for a week.

Holzapfel, A., E. Bush and D. Creech. 2024. Improving Vegetable Production in Raised Bed Home Gardens in Galveston, Texas. (aholzapfel@agcenter.lsu.edu). Accepted. **HortTechnology**. In Press.

Ross, Robyn. 2024. The Most Underrated Travel Experience in Texas: College Museums. https://www.texasmonthly.com/travel/the-most-underrated-travel-experience-in-texas-college-museums/. Texas Monthly online. (SFA Gardens was one of eight favorites – and a very nice write up)

Creech, David. Sept 10, 2024. Climate resilient plants for a 21st century Pineywoods. TFA "Reforest Lufkin" presentation, Lufkin, TX. 21 in attendance.

KTRE Tyler Oct 8, 2024: https://www.ktre.com/video/2024/10/08/sfa-gardens-prepare-fall-festival-plant-sale/ and KTRE Tyler Oct 13, 2024:

https://www.ktre.com/2024/10/13/sfa-gardens-host-annual-fall-plant-sale/

CARRI Fall Showcase, Oct 15, 2024, held at Conservation Education Building. Poster paper presentation on annual trials project, a collaboration with Dr. Andrew King.

SFA Gardens helped two students to receive an IPPS scholarship and two students to receive support from the ATCOFA to attend the International Plant Propagation Society Southern Region annual conference, Tulsa, OK. Oct 27-30, 2024. This is a wonderful conference for exposing students to the industry.

Holzapfel, A., E. Bush and D. Creech. November 2024. A Comparison of Raised Bed heights for Home Garden Production. Presentation and Poster. St. Gabriel Field Day. 65 participants.

Wild about Woody Ornamentals Conference, tour of gardens. Three speakers in morning: Dave Creech, Rafia Khan (TAMU), Andrew King (TAMU). 12 paying attendees – four staff. Tour of Gardens with two vans.

Dec, 2024. Trip advisor names the Ruby M. Mize Azalea Garden the #1 place to visit in Nacogdoches, Texas. Dec 2024.

JORDAN CUNNINGHAM 2024

Presentations:

March 12th - 'Plant sale preview' 30 mins The Four Seasons Garden Club 18 in attendance

March 14th - 'Plant sale preview' 30 mins Nacogdoches Master Gardeners 25 in attendance

April 17th – 'Gardening for pollinators' SFA Garden Lunch Bunch 12 in attendance

April 22 – SFA Gardens Greenhouse tour San Augustine Master Gardeners 10 in attendance

July 29th – SFA Gardens Greenhouse tour with Kristy and Neal Weaver 2 in attendance

October 16th – 'Saving for spring with Seeds' - SFA Garden Lunch Bunch 15 in attendance

Education/Conferences:

January 10th –12th - hosted the Texas Association of Botanical Gardens and Arboreta conference

March 2nd - Native plant Society of Texas Spring Symposium at the Lady Bird Jonson Wildflower Center

April 26th - SFA Gardens Volunteers trip to Kings Nursery

October 26th-30th – International Plant Production Society meeting in Tulsa

Plant sales:

April 6th – 7th Garden Gala Plant Sale Total: 101,037.64

October 12th- Fabolous Fall Festival Plant Sale Total: 60,526.33

Garden events:

January 10th –12th - hosted the Texas Association of Botanical Gardens and Arboreta conference

July 11th - Deep East Texas Annual and Perennial Trials

September 27th - Fruit Field Day industry field day

December 6th – Wild about Woody Ornamentals industry field day

Lunch Bunches:

Jan. 17, 2024 – Lunch Bunch with Dr. David Creech Tree planting - Dr. David Creech
Feb. 21, 2024 – The science of Soil samples with Wayne Weatherford, of the SFA Soil Plant and Water Laboratory
March 20, 2024 – Plant sale preview a trip to the Greenhouse with Jordan - Jordan Cunningham
April 17, 2024 – Gardening for pollinators - Jordan Cunningham
May 15, 2024 – Landscape tour of the Tucker House - Jordan Cunningham and Dr. David Creech
Aug. 21, 2024 – Introduction and welcome back - Jordan Cunningham
Sept. 18, 2024 – Plant sale preview - Jordan Cunningham
Oct. 16, 2024 – Saving for spring with Seeds- Jordan Cunningham
Nov. 20, 2024 – "Volunteers Make Great Educators and Interpreters" Kay Jenkins

2024 Goals Completed:

- Create a successful colony of *Phlox nivalis* ssp. *texensis* at the native plant center

A new colony of *Phlox nivalis* ssp. *texensis* has been planted in the Tucker House landscape complete with informative sign!

- Create more opportunities for volunteer involvement

We had more volunteer involvement this year and are still looking for ways to include more!

- New plantings in the garden

The perennial garden at the Ruby Mize Azalea Garden was a big hit! We look forward to cutting back and replanting in the spring

The New plantings in the Mast Arboretum were successful. We look forward to expanding the current bed annual beds and expanding to a few new areas with shade plants.

The children's garden was full this year with new plantings in time for each SFA Graduation weekend. The Purple bed that runs along the sidewalk expanded and became even more purple! We hope to redo the top tier of the children's garden with a cleaner and more butterfly friendly landscape.

Other 2024 Successes:

- This year we were excited to add Elyce Rodewald as Assistant to the Director and Kay Jenkins education program coordinator to our team! Both ladies have been vital to the success of SFA Gardens, and we are proud to have them on board!
- Our membership got a new update with new perks and names after native plants!
- We grew native seeds for the Texas Conservation Alliance. Germination was very successful.
- There are currently 17 Student Workers on pay roll at SFA Gardens
- 35 active and registered volunteers Logged 1,930 Volunteer hours

2025 Goals:

- ❖ Add plantings of small annuals and perennials to the Mast arboretum.
- ❖ Tag and select for the best native azaleas during peak spring bloom!
- ❖ Update our system of seed germination flats in the greenhouse for better results.

ELYCE RODEWALD

Assistant to the Director, ½ time

It is great to be back at SFA Gardens!

I returned to part time work in February 2024, and am grateful to Tammy Purser, Jordan Cunningham, Kim Elliott and so many other across campus who helped me learn new programs and procedures at SFA. We have a wonderful staff at SFA Gardens, and it is a pleasure to support their work through clerical and administrative duties.

Main responsibilities include:

Maintaining member and donor databases

Facilitating building and garden rentals

Scheduling garden tours

Completing travel requests and reports

Following activity and balances on 26 garden accounts

Keeping Dr. Creech out of trouble

KAY JENKINS 2024

Environmental Education Programs Coordinator

The SFA Gardens and I were fortunate that our previous environmental education programs coordinator, Dr. Alan Sowards, volunteered to stay involved with the program during the early spring of 2024. After retiring as a faculty member from the Department of Elementary Education, he served as the part-time environmental education programs coordinator for the SFA Gardens in 2022 and 2023. He helped bring back educational programs that were cancelled during the Covid-19 pandemic. In addition, Elyce Rodewald, our founding environmental education programs coordinator (2002-2019) was hired in early 2024 as part-time assistant to the director.

Filling the shoes of Elyce Rodewald and Alan Sowards as environmental education programs coordinator was intimidating, but I couldn't have asked for two better mentors. I'm truly appreciative of their guidance and the support of all the SFA Gardens staff and volunteers as we grow the environmental education programs. I am also truly grateful for the funding provided by the George and Faye Young Foundation that supported my salary for 2024.

Youth Education Events

Upon my first day of work at the SFA Gardens on February 7, 2024 I learned that the 25'th annual *Bugs, Bees, Butterflies and Blossoms Festival* was already scheduled for April 5 and 6 and the planning committee was meeting the next day. Keep Nacogdoches Beautiful founded the event in 1998 in partnership with Sowards and SFA graduate student Cheryl Boyette (Cheryl Tate at the time). Dr. Boyette and Dr. Sowards established the festival as an annual collaborative event with multiple SFA departments, agencies, local organizations and businesses participating in it every year. This year's event was no different. Dr. Melissa Hulings, assistant professor of science education, in the James I. Perkins College of Education agreed to continue her predecessors' participation in the event. Forty-two pre-service teachers in Hulings' *Teaching Science*

in Early Childhood to 6'th Grade course were trained to lead educational activities by Sowards, Ted Stevens, educational director of the Texas Forestry Association and Project Learning Tree® state coordinator, and Laura Stevens, wildland urban interface coordinator with the Texas A&M University Forest Service.

The SFA pre-service teachers served as activity hosts during the two-day event held in the Mast Arboretum and the Kingham Children's Garden. The event brought in 32 classes of students in kindergarten through third grade. In all, 554 school children were impacted by this nature-based outdoor education event. In addition, the pre-service teachers gained valuable real-life experience conducting outdoor educational activities. The Four Seasons Garden Club supported the event with $1000 in funding to help us purchase a classroom set of Project Learning Tree® *K-8 Activity Guides* for the SFA students to use in preparation for the event and T-shirts for the SFA students to wear on the days of the event. This is the largest and longest-running environmental educational program in East Texas and plans are under way for the spring 2025 event in late March.

Another annual youth educational event in which SFA Gardens, Texas Forestry Association, and the James I. Perkins College of Education collaborate is *Wild About Science*, held in the fall each year. The event was developed by Dr. Alan Sowards and Elyce Rodewald years ago. Again, pre-service teachers taking Dr. Hulings *Teaching Science in Early Childhood to 6'th Grade* course hosted the activities. Hulings, Stevens and I trained the 71 SFA pre-service to host three activities. The 4th and 5th grade classes rotated among three activity stations featuring 40-minute Project Learning Tree curriculum activities. Three SFA Gardens volunteers and a student assistant helped the pre-service teachers host some of the activities so that more school children could attend. This year's event was held at the Pineywoods Native Plant Center, and thirty-nine classes attended it, impacting a total of 671 fourth and fifth grade students.

A new youth education event was held for homeschool students, called *EcoAdventures: A Homeschool Journey into Nature* on September 16, 2024 at the Pineywoods Native Plant Center. Five SFA Gardens volunteers, two members of the East Texas Chapter of Master Naturalists and I hosted seven activity stations for the 107 homeschool children attending the event. Elyce Rodewald and I trained the activity hosts using Project Learning Tree and Project Wild curricula. The students were grouped into "classes" of similar grade levels to rotate among the activity stations. Classes of younger students rotated among four stations offering 30-minute activities while classes of older students rotated among three different stations featuring 40-minute activities. Additional volunteers and SFA Gardens staff and student assistants helped with set up, event parking, and clean up after the event.

Two learning excursions were hosted by SFA Gardens at the Pineywoods Native Plant Center. Crockett Elementary brought four classes of fourth graders for a two-hour field trip on May 14, 2024. Three volunteers, one SFA student assistant and I hosted four 30-minute activities from Project Learning Tree and Project Wild curricula for the 85 students who attended the excursion. On December 3, 2024, five SFA Gardens

volunteers and I hosted two classes of third graders from SFA Charter School for an earth explorations field trip. The 43 students rotated among three stations featuring 40-minute activities simulating rock formation, soil composition, and erosion.

The Numbers

Youth Educational Event	K- 12 Students	K- 12 Classes	Adults	SFA Students	Volunteers
Bugs, Bees, Butterflies and Blossoms	554	32	65	42	3
Wild About Science	671	39	62	72	3
EcoAdventures: A Homeschool Journey into Nature	107	7	45	1	9
Crockett Elementary Learning Excursion	85	4	8	1	4
SFA Charter School – Earth Explorations	43	2	3		5
Total	1,460	84	183	116	24

Family Fun Events

Three Saturday Family Fun events were held in 2024, beginning with the return of the *Little Princess Tea Party* on April 13. The event was held at the Ruby Mize Azalea Garden in two sessions, one in the morning and the second in the afternoon. One hundred children along with their adult companions were treated to lunch and 'tea' along with several activities. The children enjoyed interacting with live butterflies and creating their own snow globes featuring a rose bud. The weather was perfect for this popular event and the princesses' dresses were beautiful.

Botany Bliss was held on May 11. Three families of six adults and eight children participated in this free event featuring a botanical scavenger hunt with me at the Pineywoods Native Plant Center. After the hunt, participants were provided materials such as pressed flowers from which to create botanical gifts in time for Mother's Day the next day.

Pollinator Posse was another free event held on June 22 and was co-led by a member of the East Texas Chapter of Master Naturalists. Several activities were conducted inside to help participants learn about the value of pollinators including bees, wasps, bats, butterflies, moths, hummingbirds and flies. One activity had the participants simulate the interactions of pollinators and plants and helped them understand how pollination benefits both pollinators and plants. Attendees were then shown how to download and use the app 'Seek' to identify plants and animals. Everyone enjoyed going outside to practice using Seek to help them learn the names of some of the plants

and pollinators in the Pineywoods Native Plant Center that day. Eight adults and one child attended the event and participated in the activities.

The Numbers

Family Fun Event	Adults	Children	Volunteers
Botany Bliss	6	7	1
Pollinator Posse	8	1	2
Total	14	8	3

Garden Seminars

Three Garden Seminars were held in 2024. The first one, *Plant Propagation with Dr. King*, was held on January 27 and featured Dr. Andrew King, assistant director of SFA Gardens, leading a workshop on plant propagation. Thirty-one people attended the workshop.

The second one, *Gorgeous and Ghoulish Gourds*, was held on October 26 with fourteen adults attending. The workshop was led by two SFA Gardens volunteers who demonstrated how to decorate gourds using acrylic paints, shoe polish, leather die, and raffia to create birdhouses, bowls and home décor. Participants were provided gourds and materials to make their creations.

The third seminar, *Deck the Halls*, was held on December 7 in two sessions, one in the morning and the second in the afternoon. Altogether 26 adults participated in the workshop led by Dawn Stover, former SFA Gardens research associate and current agronomist with the Natural Resources Conservation Service, Plant Material Center. Participants were provided with wreath rings, live greenery and berries, and other seasonal items to make their holiday decorations.

The Numbers

Garden Seminars	Adults	Volunteers
Plant Propagation with Dr. King	31	
Gorgeous and Ghoulish Gourds	14	1
Deck the Halls	26	1
Total	71	2

The Theresa and Les Reeves Lecture Series

Twelve free lectures were held during 2024 on the second Thursday of each month. Altogether 582 people attended the lectures.

The Numbers

Date	Lecture Title	Presenter	Attendees
1/11/2024	It's a Brand-New Day at SFA Gardens, What's New and What's Not	Dr. Andrew King	94
2/8/2024	Muscadine Madness is Making Mayhem in the Pineywoods	Dr. Justin Scheiner	48
3/14/2024	Plant Sale Preview – Plants You Shouldn't Live Without	Jordan Cunningham	68
4/11/2024	Plants, Plans and People	Dr. Andrew King	24
5/9/2024	Pines, Pawpaws and Pocket Prairies	Greg Grant	89
6/13/2024	Unleashing the Flower Fairy: The Evolution of the Southern Garden Girl	Dawn Stover	74
7/11/2024	Plants and People – Gardens Making a Difference	Dr. Tina Marie (Waliczek) Cade	34
8/8/2024	Unusual Gardens and the Gardeners that Tend Them: Taking the Path Less Traveled	Steve Chamblee	37
9/12/2024	The Art of Growing Plants Where Plants Don't Want to Grow	Whitney Griffin	31
10/10/2024	Pretty Plants and Then Some – A Peek into the Diverse World of Horticulture's Supporting Industries	Cade Boyd and Lauren Kilpatrick	30
11/14/2024	Eleven Gardens in Ten Days – An England Adventure	Dr. Jim Robbins	36
12/12/2024	Plans, Plants and People: Why SFA Gardens is Destined to Flourish	Dr. David Creech	17
Total			582

Presentations

I presented a program on the Bugs, Bees, Butterflies and Blossoms (BBBB) Festival to the Four Seasons Garden Club on April 9. The Four Seasons Garden Club supported the BBBB event with a $1000 donation. The attendees were grateful to learn more about the behind the scenes work that it takes to put on this event as well as the numbers of SFA students and school-age children that are reached and the ways that the program impacts them.

I presented a program entitled, *Bugs, Bees, Butterflies, and Blossoms Festival – A Multi-Decade Collaboration"* at the Science Teachers Association of Texas conference in San Antonio on November 16. After my PowerPoint presentation, my co-presenter,

Ted Stevens, educational director of the Texas Forestry Association and Project Learning Tree® state coordinator, and I led the participants in one of the Project Learning Tree activities that we often use in the BBBB event. Although they had a choice of several concurrent sessions, twenty-four participants attended our session even though it was the last day of the conference and a Saturday morning to boot.

Funding Requests

I submitted a proposal to the Rumphius Foundation for salary support to hire student assistants needed for 2025 Pineywoods Camps. It was not funded.

Professional Development

I attended the Project Wild facilitator refresher training in Austin on July 17-18. I am now certified to offer Project Wild workshops to teachers and youth group leaders to help them use Project Wild activities to engage pre-K through 12th grade children in nature-based science.

I attended the Informal Science Educators Association conference in Corpus Christi in February, the Science Teachers Association of Texas conference in San Antonio in November, and the Texas Children in Nature Network summit in Waco in December. I learned about the new Texas Essential Knowledge and Skills standards and aligning informal educational activities with the updated standards, designing activities to support three-dimensional learning, and designing outdoor classrooms and play areas.

I completed the Project Learning Tree training online in December and I am now certified to lead Project Learning Tree activities for children attending our events. I'm looking forward to using my new knowledge and experiences gained in 2024 to reach more children and adults through our educational programs in the future.

Volunteers Supporting the Environmental Education Programs

SFA Gardens volunteers are the lifeblood of all activities occurring at the gardens. For the educational programs alone, 26 individuals contributed a total of 391 hours of volunteer time. The current monetary value of volunteer time is $33.49 per hour, therefore the value of the volunteer time contributed towards the SFA Gardens educational programs is $13,095! But volunteers provide more than monetary value to the educational programs, they are excellent role models for the SFA students that work at the gardens or participate in courses that use the gardens, and they contribute to an enthusiastic and fun work environment for staff and students.

DUKE PITTMANN 2024

Landscape Manager

It’s been a busy year at SFA Gardens.

We are on a mission to repair bridges and boardwalks throughout the gardens. Many are over 20 years old and boards are breaking which means constant vigilance and a time sink for repairs.

In addition to infrastructure, a good percentage of time has been allocated to tree take downs and debris removal. With several droughts and the epic February 2021 freeze, stress has been high.

A major project at the Gayla Mize Garden has been to overhaul the irrigation system. We are moving from drip to mini sprinklers and sprinklers. The drip lines have been a constant headache with critters chewing holes in the black poly pipe. In progress.

The Gayla Mize Garden has received a lot of new plants in the last few months, including a great transfusion of new Japanese maple varieties.

Two floods this year, one in May and the other in June, created a huge problem. In fact, the entire north end was covered by several inches of sand and most of the mulch was swept away. A careful inspection revealed that the huge debris field of trees and branches from the gardens and from across the campus had begun to serve as a dam to normal waterflow into the stream that takes floods to the Southeast corner culvert that runs under University Drive. The land to the east of the Gayla Mize accumulates a good deal of water and that was suddenly forced to run the road that bisects the garden. We concluded we needed a slight berm to steer the rushing water away from the Gayla Mize Garden and into Burrows creek. That berm worked. In 2025, we will be giving that berm another fifteen yards of caliche soil to get a little more height and width.

We have also worked at the SFA property on Stallings to create about a mile of nursery rows. Drip irrigation, mulched and it served as home to our first annual trials which was under the direction of Dr. Andrew King.

JONATHAN CARRILLO 2024

Garden Technician

I am primarily responsible for the care and culture of the Pineywoods Native Plant Center and Jimmy Hinds Park. My journey here at SFA Gardens actually began as a volunteer as I helped clean up the great mud flood of 2022, as that progressed, I wanted to do more and be involved more so I set out on a 90-day hire. I enjoyed myself immensely and with each day I grew to love the job I have now as a SFA Garden technician at the PNPC.

As I began this new experience working at the PNPC, I had to learn the dynamics of the place, which I did with all haste, because as Dr. Creech often says, “This isn’t a movie and none of us are stars!” After a couple of weeks of fine tuning how I operated my day and the prioritization of tasks that needed to be done I started to hammer away. One of the things that I started with was fixing water leaks in our preestablished flowerbeds. Why were they leaking you ask well it all has to do with that furry little guy that you see scampering around on the forest floor, the squirrel!!! When it’s hot in the summer those little guys will chew on just about anything to get a little cold water. I repaired valves, drip lines, admitters and many more odd things that chewed on so nicely. Along with the PNPC I take care of the blueberry hill on Raguet, the muscadine on Austin Street. There were repairs at both the blueberries and the muscadines. Mostly replacing admitters and drip pipe whenever it called for it.

Once my water problem was resolved I had to look towards the reduction of invasive plants in any unwanted item that may reduce the growth of the intended plants that were in that particular area. Mulch is a must they say! So that was next on the list of things to do, and to be honest, the mulching chore is never done. Some of the benefits of mulching are water conservation, weed suppression and temperature moderation. And in the end, it just makes a better-looking garden. Another thing I’ve had to do to help improve plant life and growth is the trimming of all water sprouts from the base of the plant or tree, removing all dead and trimming when necessary to help promote healthy growth. Throughout the months I’ve also had to clean up a few trees that fell in

the Jimmy Hinds Park which is also a part of the area that I manage. One of those trees was actually milled in this year's SFA forestry field station where they demonstrated how to probably mark out your boards and maximize usage of the log and then how to properly rotate and operate the mill to insurer precise cuts with precision. And in the end, they turn out some beautiful and impressive slabs of wood.

This year was my first time to head up the "pick your own" muscadine day" which was a wonderful experience and I am excited to do again this next coming year. There's a lot that comes with getting the muscadines ready for a bountiful harvest, such as making sure that the vines are growing in the proper direction, and trimming the ones that aren't beneficial to the production of fruit – and, before the crowds arrive, making sure there aren't any snakes in the vines obviously waiting for the inevitable birds that also fine the fruit enjoyable! I also make sure the plants are well watered to help produce vibrant and juicy fruit. Mowing is a constant chore, along with weed mitigation and fence repairs. And by consistently staying proactive and attentive to each task that is required will ultimately lead to a fantastic and success yield. I'm very excited to see what this upcoming year has to offer us in that area! As last year's summer came to an end and fall has arrived, I've been able to maintain the grounds with a little bit more ease but from hogs ravaging the land and squirrels demolishing everything insight there's always work to be done when you're in charge of an area like mine. I've also been able to be a part of a project in Galveston, Texas at Moody Gardens, where we have a tree research plot where we collect data on the trees, their growth and how saltwater and wind can affect these plants and their durability and longevity on the island. As this new year comes to a start, I look forward to returning there and continuing our development of this projects and also the ones that the undergraduate students will be taking on. Dr. Ed Bush and his team from LSU have also been a part of these projects and have made it a really enjoyable collaboration, and partnership. To be able to work in such a wonderful place like Moody gardens is a blessing all by itself self and I'm very grateful to Dr. Creech, who has brought me under his wing and has begun to teach me everything he knows about this wonderful place we call home. Over all this year for me has been nothing but a blessing and I look towards the future with bright open eyes and the wonderful and joyous things this next year has to offer. Always remember that life is not a race. It's a journey and you must stop and smell the roses before you make it to the final destination.

THOMAS DIMMITT 2024

SFA Gardens Technician

My primary responsibility is the care and culture of the Mast Arboretum. I am also involved in a number of the gardens outreach projects, the most important being the refurbishing of the bridges and boardwalks, many over twenty years old and in need of repair or replacement.

- January 15 – low was 9ºF
- January 25 - Mapped all the bridges and boardwalks in the gardens
- February 2 -Lost a large southern red oak in hazard trees PNPC Tucker Woods. Coordination with PP and arborist.
- February 6 -Swing bench repairs Arb
- February 8 -the very last sculpture from the sculpture for all left the Arb. Sad day for all.
- February 27 - Moody Gardens
- March 2 - Boardwalk lumber arrived to PNPC. Construction Jacks began working on the project, delays due to weather in Spring and Summer break. Happy to report it will be done beginning of Spring 2025. The club has tackled a huge project we needed to get done. Very thankful for their hard work.
- March 27 - Burrows Creek repair completion
- April 8 - Abandoned the Gardens in their most dire of times to bring my mom a surprise gift a dog named “Skip”
- April 25 - SRC irrigation work. Still a mess, need an excavator. Pipe is 6’ in the ground in red Nacogdoches clay.

- May 1 - Mast Arboretum Sign reinstalled on Wilson Drive. Also picked up an incredibly large ponytail palm donation from a lady's farm that was later donated to Moody Gardens by the SFA Gardens team.
- May 2 - Flooding
- May 9 - More hazard tree work in PNPC Tucker Woods
- May 12-13 - More flooding. Flood that took out giant Southern Red Oak in Mast Arboretum
- May 17 - Dirt work in the Gayla Mize post flooding - water bar/berm installation
- May 30 - Southern Red Oak removal to reduce pressure on water oaks it was wedged in. Coordination with PP and arborist.
- June 3 - Even more Flooding
- June 24 - Major irrigation overhaul in Gayla Mize.
- August 28 - Intramural field work.
- November -December - Lots of plantings.

DEVIN STAGE

Garden Technician

My main responsibility is the care and culture of the Ruby Mize Azalea Garden. I am reporting that SFA Gardens continues to thrive and it's my privilege to make that happen.

This past year has once again provided challenges, learning opportunities, and more victories than failures.

The gardens have in the recent past experienced some major difficulties with major environmental disturbances. These include flood events, high winds, and tree failures, (tip ups and canopy failures). In terms of floods, 2024 was a doozy. The May 2nd and June 3rd 2024 floods were rough. One took water over Starr Avenue, kind of a benchmark for really bad. Those two events created major damage to the Gayla Mize Garden. The aftermath associated with cleanup, remulching and debris removal is daunting.

While we lost a good number of large trees this year, like so many landscapes in the region, we did have one significant tree failure that was difficult from a forester's point of view. The fall resulted from high winds. The failure was a large water oak that was at the meeting of two paved paths. The root ball consequently created a vast hole in the convergence of these paths and left the trails temporarily out of service. I was able to cut and remove the lumber and tree canopy with the use of garden chainsaws and Skid steer. The Grounds department once again proved crucial to the completion of the removal effort as the gardens do not have a piece of equipment capable of getting the root ball lifted and removed from the site. The grounds heavy equipment operator collaborated with us and even helped with the delivery of fill dirt that was used to fill the vast hole that was left in the center of the pathway. The last of the gardens supply of reclaimed roofing rock that has been used in years past to remediate trail issues was implemented to cover the red clay, making the trail once more passible. The impact of the tree itself had an impact on a large community of Azaleas, one (1) neighboring Florida Maple, and one (1) Japanese maple. With the pruning of damaged limbs and a hedging of the azaleas after spring bloom, all should recover well. The Japanese maple is unfortunately likely to feel the greatest loss

with what damage did occur to its largest leader, this will ultimately reduce the trees total lifespan.

The new garden bed near the parking lot was referred to in last year's report is now well established. This year, we expanded further to the South, wrapping now around the large powerline pole. The volume of gavel parking is twice as large as last year's installation. Jordan Cunningham and many of her student assistance with a few volunteers were all essential to the community planting that took place. My expressed desire was to create a backdrop of plants that would provide variable bloom times and have a tolerance for drought. Jordan met me with a large list of plants that were suitable. We then designed the bed to have a distribution of large plants furthest from the parking with a gradient of growth that decreased in height in the direction of the parking observation point. Having this designed allows for the largest visible display of plant material that could be appreciated from this prospective. The good news is that the planting survived the two floods in May and June. Jordan provided a few replacement plants to fill the voids from those lost, and this full sun planting wants to own the place. One Species is showing signs of aggression as it relates to competition for space with neighboring plants within this community. The plant of concern is Bushy lippia (*Lippia alba*). We did not know much about the growth habits and Jordan expressed interest in observing it. Yet with an understanding of the plants' height potential, it was placed appropriately in the background. Fortunately, Jordan and I have made plans to reduce this plants occupation rate in order to reduce competition. This bed will continue to flourish as the plants grow in maturity and there are hopes to remove the two (2) declining Chinese fringe Trees that are in the foreground of the bed with *Parrotia subaequalis*.

The CARRI project and the Urban Tree Science Research Center (UTSRC), has been progressing as many trees have been planted with much more to come. This year Dr. Andrew King took advantage of the temporary space vacancies and planted many rows of annual plants via a much-appreciated CARRI grant. This study compared over 200 varieties of annuals in a challenging full sun location. Jonathan Carrillo and I installed mulch and tilled the rows before installing a poly mulch layer for weed prevention. The poly mulch layer attachment for our Kubota tractor came via grant funding and was a great experience to put together and operate. A few amendments were made to the irrigation and a Dosatron system was installed for optimal nutrient deliverability. It is our intent to continue to make soil amendments to the rows, plant many more tress and grow our understanding of what trees are affected by the evolving climate of east TX. We look forward to more research and growth from this site.

My intention is to use this experience with the SFA Garden system and grow my understanding of plants while fostering strong professional relationships. So that I wish to be a reliable means of service to the SFA community. Thankfully I have received invitations to aid in projects that reach outside of normal work duties. Including Material procurement efforts, this year's big source was a large cypress axe throwing target needed by the university sylvans program. In addition, Dr. Rebecca Kidd and I

collaborated on a colorful drought tolerant garden planting that was desired next to the playground of the Early Childhood Research Center, (ECRC) located on campus. We had second installment effort that was to back up a previous effort that yielded less survivability then needed. This year we were able to install a community of purple lantana and red salvia ‘Hotlips’ that have taken much better root. I will continue to tend to this to ensure future success.

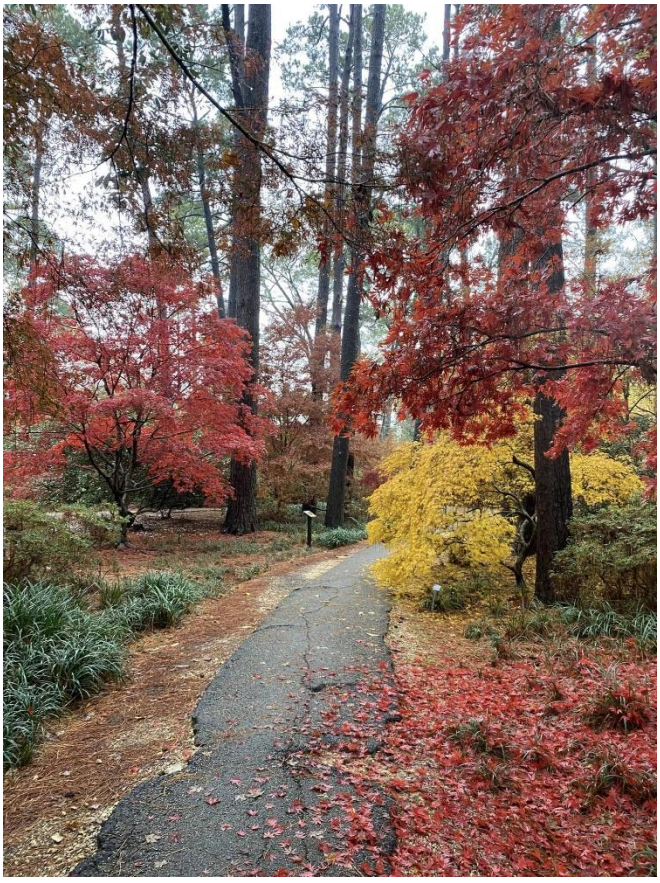
Conferences attended: IPPS, Tulsa OK; ISA State meeting in Waco TX.; TSI in Baltimore MD

ISA Certified arborist (TX-5157A)

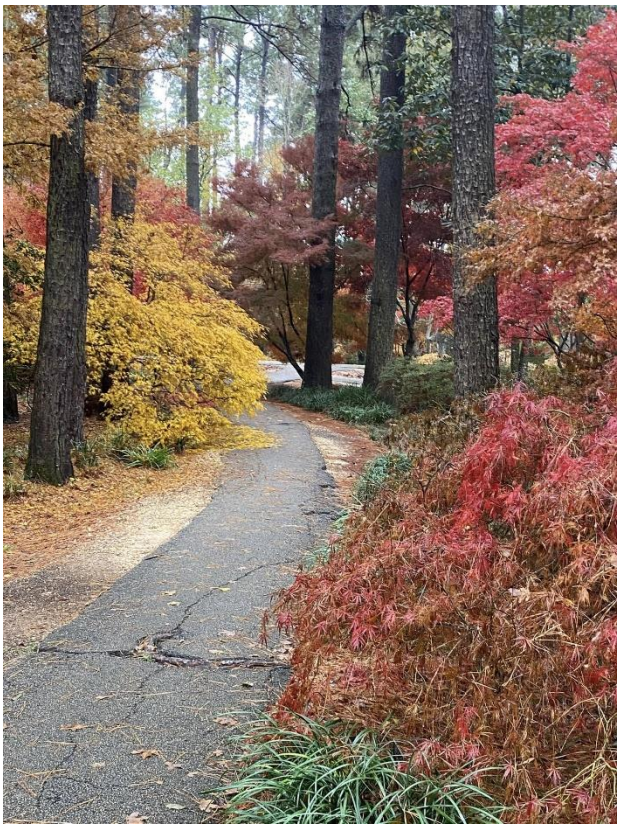
The following pictorial review of the past year is an attempt to summarize the past year. As we approach our 40th year, it’s still all about Plants, Projects and People. The fact this garden is still standing after the last four years is a remarkable testimony to the resilience of this garden, the people who tend it and the people who support it. For that, the SFA Gardens staff, board of advisors, volunteers, students and donors all say:

THANK YOU!

. **SFA GARDENS IS ALL ABOUT MAPLES**



The Spring and Fall maple color show at SFA Gardens continues to inspire, amaze and delight visitors from near and far. Upper left: Dave Creech and Diana Walker. Bottom left: Janet Creech and Maisy.



SFA Gardens is home to one of the finest collections of *Acer palmatum* and *A. japonicum* cultivars in the South. With 400 plus varieties under high canopy pine, they demonstrate the amazing diversity of this genus. The collections include other Acer species, many rarely encountered in the gardens of North America. Most have found the high canopy pines of the Ruby Mize, Gayla Mize and Mast Arboretum a perfect home.

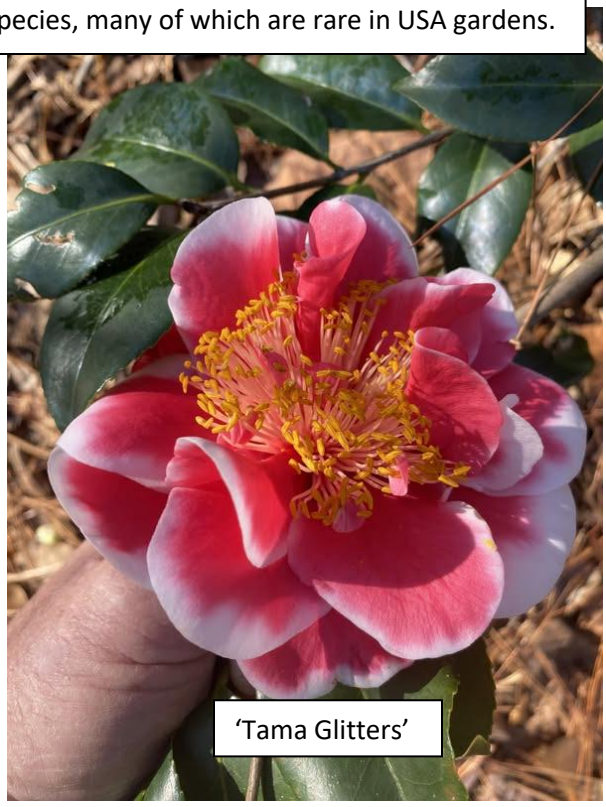
CAMELLIAS SHOUT A JOYFUL NOISE AT SFA GARDENS

‘Game Changer’

Camellia yuhsinensis

The Camellia collection at SFA Gardens is scattered in the Mast Arboretum, Ruby Mize and Gayla Mize gardens. With hundreds of varieties represented this is one of the most extensive collections in the Gulf South. Also well represented, Camellia species, many of which are rare in USA gardens.

‘Edna Campbell variegata’



‘Tama Glitters’

AZALEAS MAKE THEIR MARK AT SFA GARDENS

Top: The signature ‘Koromo Shikibus’ that mark the front lines of the Ruby Mize and Gayla Mize Gardens; a native azalea at the Tucker house at PNPC. Bottom: Native azalea varieties are plentiful in the Gayla Mize Garden.

TOO MANY PLANT SURPRISES AT SFA GARDENS TO COUNT

Top left, then clockwise: *Zingiber corallinum* is a long term survivor at SFA Gardens; Gardenia ‘Whispering Pines’ survived Feb 2021 -4F event; Stewartia sinensis has beautiful bark and flowers; X Gordilina in full sun has been a big surprise, a rare hybrid of *Gordonia* and *Franklinia*, introduced by Dr. Tom Ranney (NCSU).

ENVIRONMENTAL EDUCATION FOR KIDS

Building the next generation of gardeners, horticulturists, landscapers, nurserymen and environmental stewards needs to start early. Think Outside.

SFA GARDENS PROGRAMMING IS MAKING A DIFFERENCE

It’s been a busy year at the Ina Brundrett Conservation Building with 90 events, from the Jan 6, 2024 - Texas Association of Botanical Gardens and Arboreta conference all the way to Dr. Andrew King lecturing at the Wild about Woody Ornamentals conference, Dec 6, 2024

SFA GARDENS EXPOSES STUDENTS TO THE INDUSTRY

SFA Gardens helped two students to receive an International Plant Propagation Society scholarship and two students to receive support from the ATCOFA to attend the Southern Region IPPS annual conference, Tulsa, OK. Oct 27-30, 2024. This is a wonderful conference for exposing students to the industry.

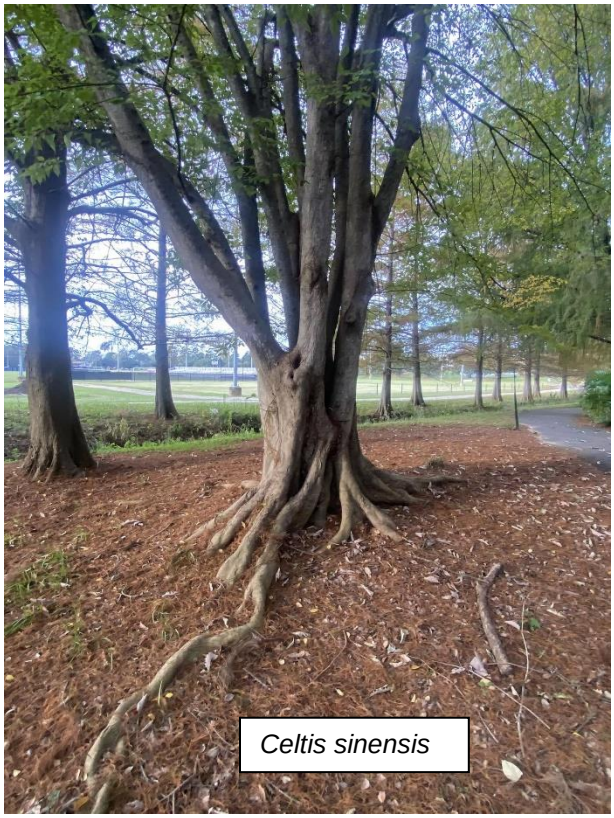
BRIDGES AND BOARDWALKS

With 26 boardwalks and bridges at SFA Gardens, many over twenty years old, we are now on a mission to rebuild better

A FEW SPECIAL TREES AT SFA GARDENS

Quercus rysophylla

Q. virginiana 'Grandview Gold' seedling



Celtis sinensis

Styrax japonica 'Emerald Pagoda'

BALD CYPRESS IS AN SFA GARDENS FOCUS FOR MANY YEARS

T406 (aka 'LaNana') is an introduction by SFA Gardens that is a seedling selection from the breeding program of Nanjing Forestry University. It's a hybrid of Bald cypress X Montezuma cypress and it enjoys strong resistance to needle blight, is fast growing, tolerates high alkalinity and has no knees.

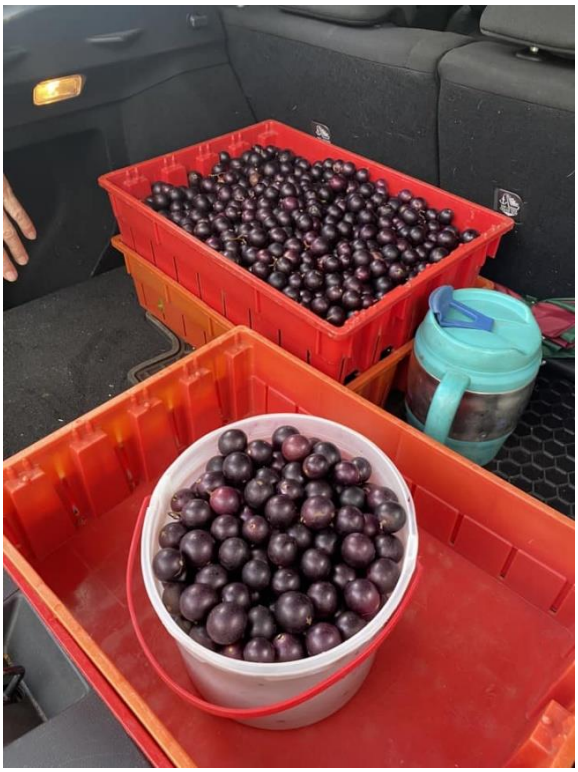
Taxodium distichum ‘Oaxaca Child’, Tulane

Taxodium distichum ‘Little Guy’ was best in show at FNLA

Taxodium X ‘T502’ at Red River Wildlife Refuge Bossier, LA

SFA Gardens inventory of Taxodium genotypes is one of the largest in the nation. Besides the introduction of ‘LaNana’, SFA introduced ‘Oaxaca Child’, a Montezuma cypress, a seedling from the world record tree in Oaxaca, Mexico. ‘Little Guy’ has been scattered far and wide since we introduced it (found by Jim Berry, JBerry Nursery, near Gran Saline, TX) and it is in high demand. Taxodium ‘T502’ is a hybrid of good form and character, pictured here at the Red River Wildlife Refuge near Bossier, La.

SFA GARDENS FRUIT RESEARCH



SFA Gardens fruit work has for many years focused on muscadine grapes, golden kiwifruit, blueberries, figs, feijoas and other alternative fruits. Top: Muscadine patch on Austin Street. Bottom: Ross Stevenson (KiwiKo, Auckland, NZ) lecturing at the fruit field day, and a fine producing variety 'Golden Dragon'.

Top left, clockwise: Kiwifruit harvest time in September; Fruit workshop at SFA in September; Feijoa bloom; Feijoa plants with our cooperator Dr. Tim Hartmann, TAMU; Vaccinium A119 is a potential new release that shows great promise in our work which enjoys fragrant flowers and consistent production.

THE PINEYWOODS NATIVE PLANT CENTER

The 40-acre PNPC serves as the hub of the 138-acre SFA Gardens. It's home to the Tucker house, greenhouse and nursery complex, the Ina Brundrett Conservation Education Building and 2 miles of trails, boardwalks. bridges and a native plant garden.

ACCOLADES FROM AFAR

TEXAS HISTORY

The Most Underrated Travel Experience in Texas: College Museums

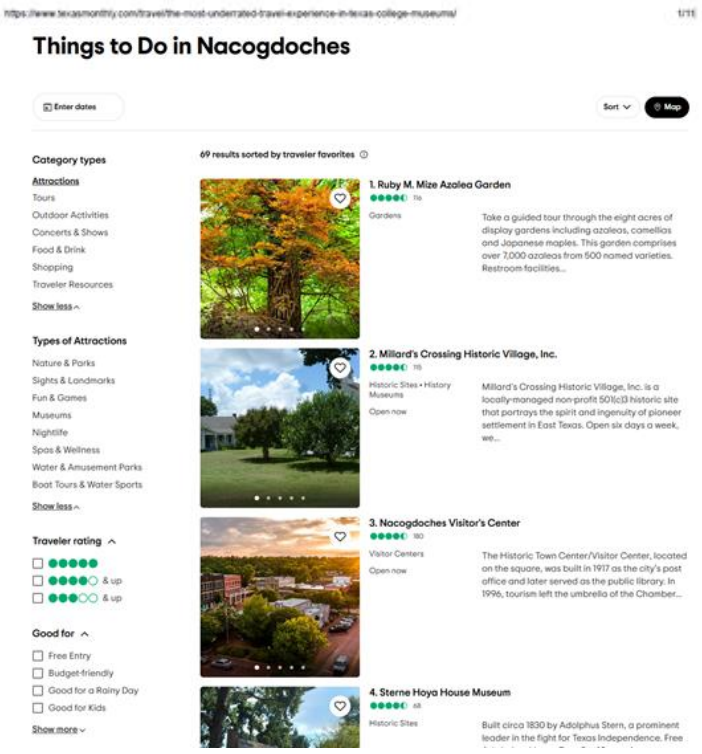
Space rocks, shipwrecks, and dinosaurs: Museums on university campuses are teeming with hidden gems. Here are eight favorites.

By Robyn Ross

September 4, 2024

Visitors at the Sue S. Bancroft Women's Leadership Hall listening to audio clips of female Texas leaders. Courtesy of Texas Woman's University

SFA Gardens was recognized in Texas Monthly in Sept 2024 as one of the favorite gems on Texas University campuses. The Ruby Mize Gardens, in particular, was given a shoutout for the color bonanza in the spring and late fall.



https://www.texasmonthly.com/travel/the-most-underrated-travel-experience-in-texas-college-museums/ 1/11

Things to Do in Nacogdoches

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69 results sorted by traveler favorites

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1. Ruby M. Mize Azalea Garden
Gardens
Take a guided tour through the eight acres of display gardens including azaleas, camellias and Japanese maples. This garden comprises over 7,000 azaleas from 500 named varieties. Restroom facilities...

2. Millard's Crossing Historic Village, Inc.
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Millard's Crossing Historic Village, Inc. is a locally-managed non-profit 501c3 historic site that portrays the spirit and ingenuity of pioneer settlement in East Texas. Open six days a week, we...

3. Nacogdoches Visitor's Center
Visitor Centers
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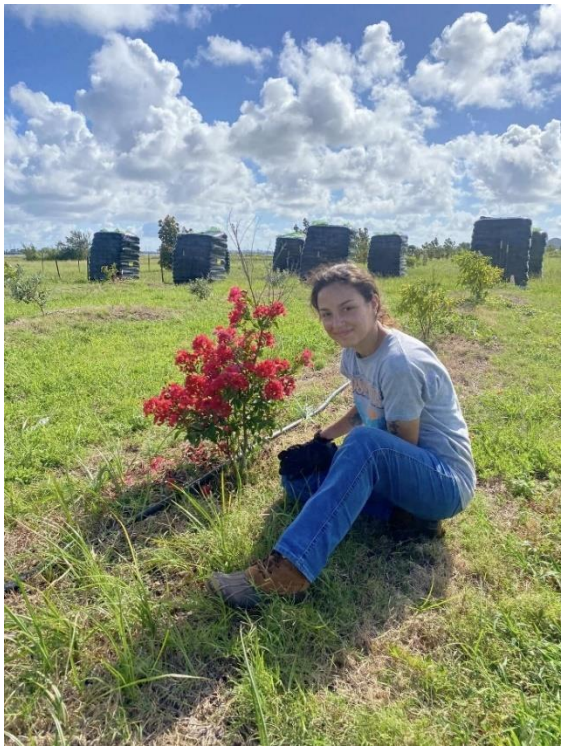
The Historic Town Center/Visitor Center, located on the square, was built in 1917 as the city's post office and later served as the public library. In 1996, tourism left the umbrella of the Chamber...

4. Sterne Hoya House Museum
Historic Sites
Built circa 1830 by Adolphus Stern, a prominent leader in the fight for Texas Independence. Free

Another surprise in 2024 was Trip Advisors #1 ranking of the Ruby Mize Garden as the place to visit when in Nacogdoches, particularly during the spring azalea show and the Japanese maple color bonanza in early December.

MOODY GARDENS PROJECT

SFA Gardens has enjoyed a research project at Moody Gardens since 2016. In the past year we have added a 'Coastal Roots' environmental education program with LSU. Upper left, clockwise: Plots on N side airport, Taxodium T 406 in second year, Myrcianthes fragrans, Vega raised bed gardening study, Myrcianthes fragrans fruit.



The Moody Gardens project has been a wonderful real world evaluation program for wind and salinity tolerant landscape plant materials. It's involved numerous SFA students of various disciplines, generated five MSc thesis projects (two underway) and has revealed a number of Galveston Island tough plants. Top left, clockwise: *Lagerstroemia langkawiensis,* a rare semi-tropical crape, seldom encountered, now on the island; SFA student Holley Martinez with one of our crape myrtles in trial; an about to be tested Podocarpus species from Northern Vietnam; Dr. Bush harvesting our potato crop from varying depth raised beds.

ANNUALS TRIAL AT THE CARRI CENTER ON STALLINGS DRIVE

Drs. Andrew King and Dave Creech at the Annuals Trial at the SFA property on Stallings Dr. This project was funded by the Center for Applied Rural Research and Innovation (CARRI). Existing tree nursery making is good growth.


"Seriously, trust me on this one . . . It's a really great idea