



SFA Gardens NEWS

Notes from the Director

By Dr. David Creech

We'll start with some good news at SFA Gardens. Dawn made me promise to be upbeat and cheerful.

First, the SFA Gardens environmental education program is back on track. By good fortune, we received a gift from an anonymous donor, who all I can say is more than just a jewel in our community. She's the life raft that will save the environmental education program. Dr. Alan Sowards is the new casual hire as the coordinator of the environmental education program at SFA Gardens. Recently retired from the James I. Perkins College of Education, he has a long history in outdoor science education and now fills the position that was formerly held by Elyce Rodewald, who retired in spring 2020. Elyce's retirement coincided with the start of the pandemic, when our numbers fell from approximately 12,000 kids per year to zero. After a year passed, we requested to fill this state salary line position. The request was denied. When that happened, I realized that SFA's fiscal situation was more than just a passing blip. After all, donors built the Brundrett Conservation Education Building for the primary purpose of outdoor

education. We have butterfly nets, microscopes, rain gear and a storeroom that needs using. No one can deny our youngest citizens need the position. Our kids have been glued to a phone or iPad screen, and getting into nature is exactly what they need right now. We're determined to bring life back to this oh so important program

Second, I can report we have hired Amanda Romig as the new program specialist. Anne Sullivan retired in June 2021, and after some scrambling behind the scenes to find funding, we were able to post, interview and bring Amanda in as a half-time position. In our business, we call this a soft money hire. When you call or email to set up an event; be a member; schedule a wedding, party or meeting place; or simply have a question, Amanda is in charge. With her professional history working in SFA's former Office of Research and Sponsored Programs, Amanda is deeply familiar with several of our research grants. When I realized she was strong in following laws, rules,

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regulations, policies, procedures and guidelines, I knew she was exactly what we needed. Those aren't exactly my strengths. Amanda introduces herself on the next page.

In the garden, kudos need to go out to Dawn Stover, Jordan Cunningham, student workers and volunteers for building a fine inventory of healthy container plants for the October plant sale. We're excited the plant sale was face to face and was, for the first time, a two-day event on Oct. 9 and 10, at the Pineywoods Native Plant Center. A round of applause for Duke Pittman, Thomas Dimmitt, Devin Theisen and student workers for cleaning up the garden of freeze debris and bringing the garden back to good health. It's been an epic job, and it's still not finished. The freeze also has encouraged heavy weed pressures. With dead trees and shrubs comes disturbed soil and sunlight on the ground, just exactly what weeds need to prosper. Of course, the only thing slowing down weeds right now is the terrible dry spell we're in. So, from watching plants drown in late spring and early summer downpours to watching this drought never end, we've had our work cut out for us. I can report that Malcolm Turner has just moved on from his kiwifruit and Moody Gardens

research technician position to take a fine job at Twinwood Farms in Simonton, Texas, as the manager of a new kiwifruit enterprise. We have high hopes the Twinwood Farms kiwifruit farm will be a great success, and Malcolm is just the one to make it happen. He did leave our fruit plots in good shape. Still, I must admit I find myself texting him to take care of some emergency, only to realize he's gone and it must be up to me.

If there's anything I miss in this era of COVID-19, it's traveling to conferences, giving a talk or two and getting together with friends. I managed a few face-to-face talks



Jordan Cunningham building inventory for the October plant sale.

back in June, but most are now back to Zoom. With active cases up and ICU's full, it's easy to understand why. While Zoom is OK, the past year made me realize that giving and listening to talks is not the purpose of going to a conference or convention. What's really important is connecting with old friends and like-minded colleagues, telling tall tales, enjoying fine dining, swapping cool plants, learning something new and returning inspired to a garden that needs us. After all, our work is rather simple. We're here to educate, entertain and enlighten, so let's keep planting.



Meet Amanda Romig

My name is Amanda Romig, and I'm SFA Gardens' new program associate. I'll be assisting with events, planning, scheduling, memberships, memorials and the daily administrative needs of SFA Gardens.

I'm a Lumberjack through and through, having moved here over 20 years ago to attend SFA. I received a degree in horticulture and, while attending SFA, worked in the Mast Arboretum. I have worked for city and state offices and most recently at SFA in the Office of Research and Graduate Studies for almost six years.

I am married to Matt Romig, who also works at SFA and is a fellow Lumberjack. We have two daughters, Naomi and Anslie, and love calling Nacogdoches home.

I've always wanted to work for the SFA Gardens and I'm excited about the future.

Native Plant Spotlight: Frostweed, *Verbesina virginica*

By Dawn Stover

Frostweed has long been touted as a valuable nectar source for monarch butterflies migrating south in the fall. It blooms as the heat of summer begins to wane and continues until frost, providing a critical energy source for monarchs during their migration period. Many gardeners say monarch butterflies nectar almost solely on frostweed, preferring it to most of the other plants blooming at the same time. Monarch Watch, a nonprofit organization focused on monarch conservation, has designated it as a monitoring plant due to its attractiveness to monarchs.

Beyond monarch butterflies, frostweed is a busy plant for all manner of pollinators. If you stand still and observe the flowers long enough, you'll find bees, butterflies, wasps and flies of all sizes busily sipping nectar. The relatively large, flat umbels of bright white flowers make a perfect landing pad for nectaring insects, especially large butterflies.

For a long time, I thought frostweed was only native to counties further west of Nacogdoches, but I've encountered it enough times to know differently. In fact, I've been able to collect seeds and cuttings from



plants near the U.S. Department of Agriculture's East Texas Plant Materials Center and from alongside the county road that I live on. You'll find them in the xeric bed in front of the Tucker House at the Pineywoods Native Plant Center.

Frostweed plants are quite easy to grow and perform well in most garden situations. They are drought tolerant and bloom well in full sun as well as partial shade. I've seen frostweed described as "gregarious," and that's a nice way of saying they like to seed around a bit. I don't find that terribly troublesome as they are happy to poke up through other plants without taking up a lot of real estate. Ask me in a few years if I still think of them as gregarious or if I changed my description of them to "obnoxious." Given my passion for pollinators, my money is on the former.



The distinct dark lavender color and bell-shaped flower of *Asimina triloba*

Papaws: An American History

By Thomas Dimmitt

Pawpaw (*Asimina triloba*), also paw paw and papaw, is a tree with superb potential in the landscape and garden for its historical background, ability to attract wildlife, fruit and hardiness. Historically, pawpaws have been a fruit used by colonial and pioneer Americans. Unfortunately, it's less used today but still seems to evoke nostalgia from some southerners who come in contact with the tree. The first written report about pawpaws was made in 1541 by a member of Spaniard Hernando de Soto's expedition, who witnessed Native Americans in the Mississippi River valley growing and harvesting the fruit. De Soto's expedition named the fruit pawpaw, which was derived from the Spanish word for papaya, or papaia.

Lewis and Clark wrote about how they ran low on provisions during their expedition of America and had to survive for several days on wild pawpaws. Thomas Jefferson

grew pawpaws at Monticello and, while serving as minister to France in 1786, he had the seeds shipped to friends in France. Records also show George Washington grew the plant at his home at Mount Vernon. Along with the impact pawpaws made on historical figures, they became a popular children's folk song still sung today, titled "Paw Paw Patch."

The pawpaw is part of the Annonaceae family and is the northernmost representative of this mainly tropical and subtropical family. It also is distantly related to the magnolia and tuliptree. The pawpaws range is found throughout most of the eastern United States except for New England and large parts of Florida. It is an understory tree found in moisture-rich locations, such as the bottoms of ravines, steep hillsides and creek banks. Its location also is interestingly enough hinted at in "Paw Paw Patch" with the line "Come on, boys, let's go find

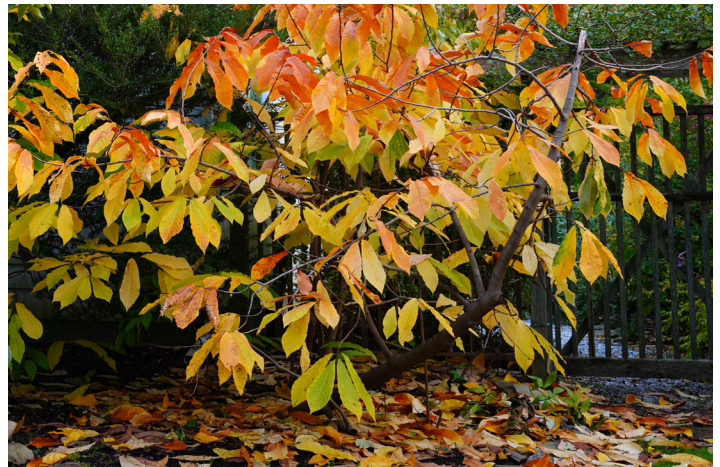
her, Way down yonder,” hinting at these low, hydric and riparian areas. The tree can typically reach a height of 25 feet and a spread of 15 feet. Historically, pawpaws are spread by fruit-eating megafauna; but as megafauna became extinct, pawpaws became increasingly spread by humans. Scientists speculate that the northernmost ranges of pawpaw in New York were established from Iroquois population movements. The tree also has the advantage of spread by root suckers; however, it is perfectly capable of reproducing if cross pollinated from a genetically different organism.

Pawpaw trees can easily be identified by their distinct hanging, obovate leaves that resemble dog ears and naked buds. The leaf pattern is simple alternate and typically green, but it does turn gold and brown in the fall. When crushed, the leaves give off an odor resembling that of bell peppers. In the spring, flowers from pawpaw trees are a distinct dark lavender color with a bell-shaped appearance made of six petals. The bark tends to be smooth and thin, but it can become warty and rough as it ages. The taste of pawpaw fruit is comparable to peaches, mangos and bananas. The fruit also is typically 2 to 4 inches long and exhibits a green color that turns yellowish as it ripens. Flowers are almost exclusively pollinated by flies, like many other fruits in the Annonaceae family, but can be pollinated by other insects.

Pawpaws can be found typically in hardiness zones five through nine, allowing the plant to have a wide range of potential use in the garden. Not only does this fruit-producing tree enrich garden diversity, it also is an attractor of zebra swallowtails as their caterpillars feed exclusively on *Asimina foliata*. This gives this tree great potential in a butterfly garden while still helping establish a native species with a great American history.



The obovate, simple alternate leaves of *Asimina triloba*



The coloring of a pawpaw tree in fall



Creech Wins Awards

Dr. David Creech, professor emeritus of agriculture and director of SFA Gardens, was awarded the Silver Level Grant Award at the July meeting of the SFA Board of Regents. Since 2015, Creech has received more than \$600,000 in grant awards for submitted proposals. Funded projects include finding, evaluating and promoting salt- and hurricane-tolerant plants for Galveston Island; investigating the potential for golden kiwifruit as a new specialty crop in Texas; and evaluating woody ornamentals for Galveston Island in an era of rapid climate change. This funding is used to support the research and scholarly endeavors of both graduate and undergraduate students. Additionally, Creech was awarded the Lifetime Service Membership Award by the Louisiana State Horticulture Society at its annual conference, held June 29 in Lake Charles, Louisiana.

Wilderness Workout Women

By Dawn Stover

We have many regular visitors in the gardens. From dog walkers to daily runners and folks on leisurely strolls, our foot traffic has significantly increased since COVID-19 stopped people from gathering in indoor spaces. Some of our newest and most consistent visitors are the Wilderness Workout Women who, rain or shine, visit the garden three days a week without fail.

The women were members of a local gym and attended a fitness class there together. When the pandemic ended their group classes, they wanted to remain connected as friends and with fitness. They gathered initially to walk the garden trails but eventually found the wooden deck in the Mast Arboretum shade garden where they could add in stretching and yoga practice. During inclement weather, you might find them at the Kingham Children's Garden pavilion, and during the hottest part of the summer under the tunnel of 'Cascade Falls' bald cypress.

Their walks evolved into a routine, and they asked member Amber Cnossen to lead them in their practice. The ladies were all quick to mention that Amber competed in the 1992 Olympics in Barcelona, Spain, and that she was really the glue that holds the group together. While Amber lived in Nacogdoches for a brief time when her daughter attended SFA on scholarship, she's back near family in Idaho and continues to instruct the group by phone and portable speaker.

When asked which garden was a favorite for walks,

the collective response was "All of it!" They especially like seeing new things each visit, like blooms in the trial garden, and getting to know the other regular garden visitors. Despite reopening of Texas businesses, including gyms, the Wilderness Workout Women prefer to keep the workout wild in our gardens and have become members to show their gratitude for the space.



The East Texas Gardeners' Five Signs It's Fall

By Jordan Cunningham

1

Sweaters? How about layers!

People in other places may think it is time for sweaters in the fall, but here in East Texas, we aren't ready for our heavy coats quite yet. Maybe by late October we will start to use the word "chilly," but even then, the afternoons are still a bit "toasty." Real Texas folk know to wear layers you can shed as the day warms up.

4

The big fall holiday

A big holiday comes in with the change in the season, but it has nothing to do with candy and costumes. The first Friday in November is Texas Arbor Day. This year on Friday, Nov. 5, help us celebrate by planting a tree of your own or joining other public tree planting events.

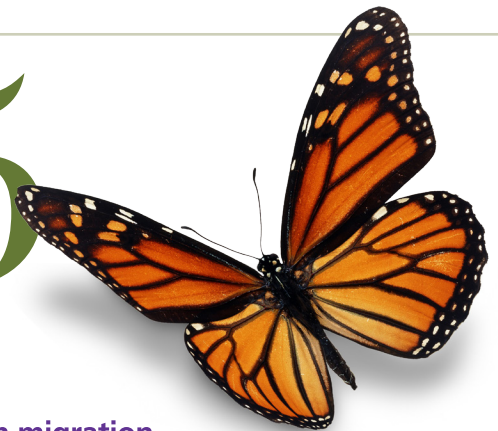


Symphotrichum oblongifolium Fall aster

More blooms, less pumpkin spice

You could fill your cart with pumpkin spice products, or you could fill your yard with fall blooming plants! Fall is here when we see heavenly purple fall blooming asters or the fire-engine-red cardinal flowers. Early season camellias are showing off, and bright yellow goldenrods are making an appearance. What plant says fall to you?

5



Monarch migration

Fall also is the time when our state butterfly migrates back to Mexico. Keep an eye out for our royal beauties between late September and early November. Monarchs need fuel to power their trip, so be sure to have some fall blooming plants in your yard and milkweed for monarch caterpillars!

3

It's game time!

Nothing says fall to a sports fan like the start of football season. However, it is game time in the garden, too! Fall is a great time to plant now that the 100-degree temperatures have subsided and the rains have returned. Things planted in the fall have a better chance of making it through next year's sweltering summer.



Another Successful Virtual Conference

By Jordan Cunningham

During the third week of July, I virtually attended the conference “Gardening for Monarchs and Other Wildlife with Native Plants in Texas,” hosted by the National Wildlife Federation’s Texas Chapter on Zoom. It was a wonderful event put on over two days with great speakers, including our own Dawn Stover. I learned many new things, and all tips were geared toward the Texas gardener.

Although we do not gather in large groups as much anymore, the sharing of ideas and information is still important. That is why nonprofits like the NWF are using virtual platforms like Zoom. Virtual conferences have some downfalls. It is not the same as being able to travel to a conference center and meet new people, or go to other gardens and experience plants and pollinators firsthand. Some people are very turned off by technology, and technical difficulties can be a real struggle. I can only imagine what it must be like to present to your computer screen. How could you know if your audience is engaged or even paying attention? However, virtual conferences on platforms like Zoom also have some benefits. There are no travel or overnight costs or headaches. During the conference, I got to go home and sleep in my own bed. Virtual conferences are social-distance friendly and can bring many people spread out over great distances all together with just the click of a button. With the chat

feature, viewers can ask questions and give comments in real time. Speakers can choose to answer questions as they come up, or the program saves all messages so that they can be referred to later. Plus, if you need to stand up and stretch or get another cup of coffee, you can do so without disturbing anyone.

With this conference, SFA Gardens hosted a viewing of the proceedings here in the Brundrett Conservation Education Building, something we never would have been about to do if this were an in-person-only event. I was able to enjoy the quiet surroundings of the SFA Gardens as I learned from some great experts. Here are just a few of the things I learned during the conference.

David Mizejewski, a naturalist with NWF, spoke on how to attract all kinds of wildlife to your garden. We learned that 90% of bugs need the plants they evolved with to survive. That means that most of our native bugs need native plants to live. He said our native oak species are host to 57 different caterpillar species and that a single nest of chickadees can eat between 6,000 and 9,000 caterpillars from the time they are born to the time they leave the nest. There are three billion fewer birds in North America than in 1970 due to lack of habitat and food. To help our birds, we need to increase our caterpillar totals, which means we need to plant more native trees.





Dawn Stover gave a talk on creating native habitats. She listed some of the many benefits of growing natives in your yard, like water conservation, reduced fertilizer needs and carbon storage. She shared Dr. Doug Tallamy's recommendation of planting no more than 30% nonnatives in your yard, but she recommends even less than that. Nonnative plants do not support or shelter insects and other species the way our native plants do. Also, nonnative plants and poor land management techniques lead to excessive water runoff. Our East Texas forests and prairies can absorb and use so much more rainwater than a plot of agricultural land. Recreating forest floors and prairies in your own yard can reduce the need for supplemental watering and decrease the risk of flooding. On the topic of pollinators, she shared that butterflies are just OK pollinators. The best and most productive pollinators are our own native bees and flies.

Chris Anastas gave a talk on collecting and growing milkweed. One tip she gave was when you are collecting seed in the wild, you should only collect 10% of what is ripe. It is important to save seed for future generations in the wild so that wild collection can continue. She recommended using mesh bags on seed pods to keep milkweed bugs away. Milkweed bugs suck the life and health out of milkweed seeds, making them no longer viable. She recommended doing a germination test before sowing a full pod and using mycorrhizals, types of fungus, to increase mature plant health and girth.



These are just a few of the things I learned. All these practices can be applied here at SFA Gardens and in my own garden at home. The mission of the NWF is "to inspire Americans to protect wildlife for our children's future." The conference I attended in July more than fulfills this mission, and I am looking forward to the presentation next year. Most NWF events and online conferences are open to the public. You can find other upcoming events and wildlife resources on their website nwf.org.



Kiwifruit Project Enjoys Another Good Harvest

By Dr. David Creech

With six crops out of the last eight years, our oldest patch of golden kiwifruit continues to surprise. Considering all the weather challenges we've endured, it's amazing our vines are still thriving. To be honest, when I first stumbled outside the morning of Feb. 16 to see -4°F on the thermometer, I just knew the kiwifruit crop and young plants would be toast. I was wrong. While figs, pomegranates, pineapple guava, olives and a slew of other fruits went to the ground here, the kiwifruit managed to survive.

We're in the midst of our harvest, and the crop can be described as a medium yield. Most importantly, our young plant nurseries are in tip-top shape. We're weighing the crop from our old vines on Starr Avenue (Golden Dragon, Golden Sunshine and Gulf Coast) and getting a first small crop on a range of new varieties from our collaboration with TopFruit in South Africa. As in previous years, we look at average weight per fruit, brix (sugar content), and gather more than 100 consumer evaluations. This global enterprise has become a Zoom friend for a few years, and they hold the license for seven varieties introduced by Miko Asia Ltd. based in Auckland, New Zealand. Our hope is that in the mix of varieties, males and females, there will be a perfect combination for any spot in East Texas.



A Classroom Back in Every Garden/Forest

By Alan Soward

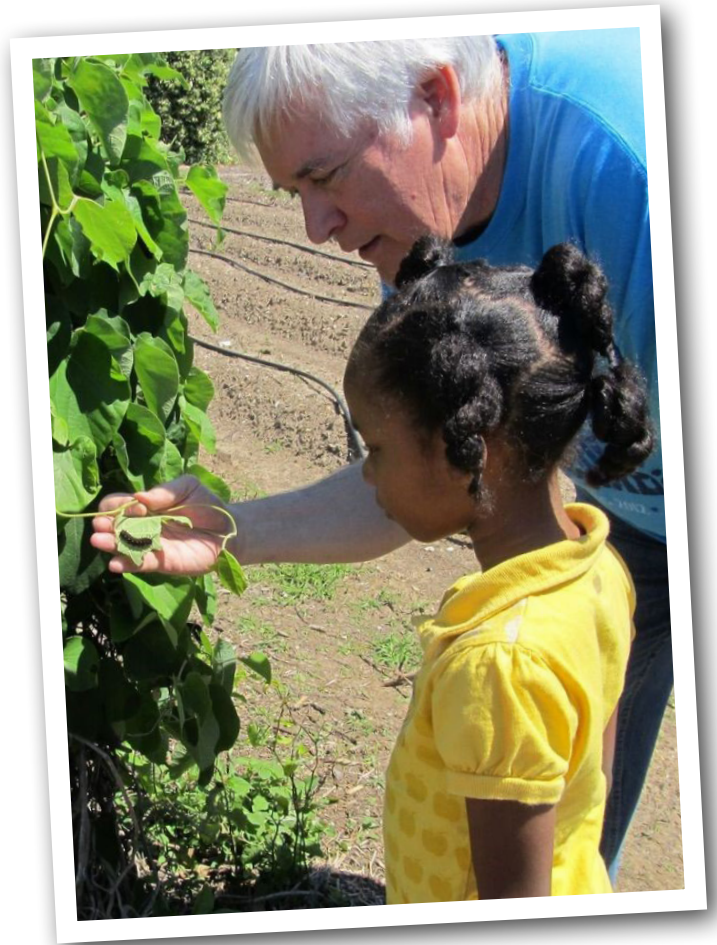
We need programs that take science out of the classroom and into nature's science lab: the great outdoors. Where better to accomplish this than in the SFA Gardens.

In a time when coronavirus has captured the headlines and dictated how we live our lives, it is time to follow the science and recapture our children's curiosity, reduce their stress (from having to be in front of computer screens), and immerse their senses once again in the great outdoors.

As more students return to school settings, maintaining proper distancing in existing classrooms will be challenging. Schools were not designed to allow for students to "social distance." In the outdoors, by contrast, students can spread out and fresh air is constantly available, making outside safer than poorly ventilated rooms.

We have an opportunity to breathe new life into our outdoor programs at the SFA Gardens. Positive indicators appear to be on the horizon for a much-anticipated come back.

My name is Dr. Alan Sowards, retired professor from the James I. Perkins College of Education. I have been hired by the SFA Gardens to reestablish partnerships that are supportive of the mission to bring back SFA students, faculty, public and private school students and their teachers, and all other outdoor enthusiasts to the SFA Gardens. I am very excited about the opportunity to plan and participate in these education programs and hope you will join me and other staff members in supporting the SFA Gardens.



Moody Gardens Project Enters Next Phase

By Dr. David Creech

We have two graduate students working hard to finish their thesis projects at Moody Gardens on Galveston Island. Ilah Ilhan is supervised by Dr. Steve Wagner, SFA professor of biology, and she's on a project evaluating the impact of mycorrhiza on three bald cypress clones in our aerial and soil salt stressed plots. Rachel Murray is supervised by Dr. Ken Farrish, director of SFA's Department of Environmental Science, and she is conducting an exciting soil salt survey across the entire island, collecting hundreds of samples from soil cores collected from a wide range of computer-generated locations. Both studies are real-world projects important for dealing with a changing climate and rising seas.

For the horticultural side, we have accumulated and grown a wide range of new salt tolerant ornamentals at SFA Gardens. Those will be planted into our two-acre plot later this fall. Before that happens, we have an irrigation system to repair, and we will be filling holes left after a good number of trees were dug up and moved from the plots to various city and school parks on the island. It's a great project — minus the incessant wind, high heat, humidity and mosquitoes that can carry you off if you're not careful.



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*“Study nature, love nature, stay close
to nature. It will never fail you.”*

Frank Lloyd Wright

