



SFA Gardens NEWS

Notes from the Director

By Dr. David Creech

Is this the most lean, mean, weed-pulling team you've ever seen? For those of you who have been with us from the start, isn't it hard to believe that since 1985 we've gone from about half an acre on the south side of the Agriculture Building to nine staff members, 128 acres, four major theme gardens and an amazing collection of plants? Never underestimate the power of adventuresome gardeners.

Since the summer newsletter, I spent three weeks in China where I attended the International Botanical Garden Congress in Shenzhen, which hosted more than 7,000 registrants from around the world. Shenzhen is one of those new "from-the-ground-up cities" that is home to 11 million citizens. There are shrub- and vine-lined, vegetated and mist-cooled skywalks between the high-rises that tower above wide tree-lined streets. Underground, there's a city of malls packed with restaurants and shops. Go down another level, and you can hop on the subway.

I moderated a session on "Botanical Gardens and the Exploration of Salt-Tolerant Crops" and presented the paper "Finding Climate Change Friendly Ornamentals for Galveston Island, Texas, and the Strategies

Needed to Deal with a Salt-Challenged Environment." After the conference, Janet and I jumped in bullet trains, planes and automobiles with friends and colleagues from Nanjing Botanical Garden for a busy schedule of seminar presentations, touring bald cypress projects in the Jiangsu Province on a scale that's hard to imagine, visiting a kiwifruit breeder in Central China, who has seven new varieties that will be emerging from the U.S. Department of Agriculture's quarantine in 2018, and touring nurseries in the Ningbo Region. As is my way, I returned jet-lagged, confused and a little grumpy. Dawn says I'm always like that.

After Hurricane Harvey dumped record-setting rains on our friends to the south and then Irma tore through Florida and the Southeast, I'm convinced elevation matters. The scale of these two tragedies is impossible to comprehend. We dodged the bullet at SFA Gardens. Lanana Creek stayed in her banks, and while we had a few giant water oaks fall, all

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in all we came through in fine shape. Even our Moody Gardens research plots on Galveston Island came through in good shape. The surge edged near our plots, which are only four feet above sea level, but never entered. While we had a few trees blown down and some beat up plants, Malcolm Turner made short work of getting them propped, tied to a stake, and now we're back in business.

The golden kiwifruit research project is moving forward. If you haven't seen it lately or followed the SFA Gardens Facebook page, pay a visit. Malcolm has constructed the first teepee system of training in Texas. This project is supported by a Texas Department of Agriculture Specialty Crops grant that we share with Tim Hartmann of Texas A&M University, who is building a research block in the Brazos river bottom near College Station, which is a more challenging location. In the years ahead, we will be testing golden kiwifruit varieties in other locations. We have much to learn, and in four or five years, we will know if this exciting crop is destined to be a commercial success, a backyard garden adventure or a waste of time. Time will tell.

We have been promising a new greenhouse for a number of newsletters, and I'm here to say we're getting close. Someone once said that the speed of paperwork making it through a university is deceiving; we're



Top: SFA Gardens has grown to include nine staff members. Pictured back row, from left, are Duke Pittman, Chris Dempsey, Elyce Rodewald and Jordan Cunningham. Pictured front row, from left, are Jocelyn Moore, Dawn Stover, Dr. David Creech, Malcolm Turner and Anne Sullivan.

Bottom: Photos of Creech's visit to the International Botanical Garden Congress in Shenzhen, China.

actually slower than we look. It's all about following rules, laws, regulations, policies, procedures and guidelines. Specifications are going out for bid, and hopefully we will soon see a new three-

bay Quonset structure going in on the north side of the Pinewoods Native Plant Center horticulture facility. We're excited. Stay tuned. In the meantime, let's keep planting!

The Persian and Chinese Witch Hazels

By Dr. David Creech



Parrotia persica

Like few of us, the Persian and Chinese witch hazels only get better with age. While Persian ironwood is not overly encumbered with a blinding floral display, this tree makes up for it with great form, bark interest, good fall color and a durable disposition in the garden. Given a little time (OK, 10 years or more), this tree will create

a lively conversation piece. For best performance in the Deep South, keep the tree in a location that's slightly acidic, has medium moisture and is well drained. This tree has been through the grinder here from freezes, droughts and blasting heats to floods, tornadoes and hurricanes, and it just keeps on trucking.

The genus name recognizes the founder F.W. Parrot (1792-1841) who was a German naturalist. *Parrotia persica* is a small, single- to multi-trunk deciduous tree that will top out at 20 to 40 feet tall. The flowers lack petals and comprise reddish stamens surrounded by brown bracts. The flowers appear before leaves. With a good hand lens, you might call them pretty. Fall foliage color is a key feature with most showing off with butterscotch to yellow hues as temperatures cool in the fall. With age, the bark exfoliates to show green, white or tan patches beneath, and it's quite striking the older a tree gets.

There are varieties. We've worked hard to get the pendulous form and have had several purported weepers that never panned out. I acquired three that were fakes before finally getting the real thing. I think it's a Kew England plant under many names, but 'Kew's weeping' is best. It's strongly weeping and defines the word slow. We are rooting it, and if I hand you a gallon, it means I like you. It's a special plant for someone looking to be edgy. We have one cultivar named 'Biltmore,' and I assume it's from the big tree there but it looks like the straight species to me. 'Vanessa' is

another variety and seems to feature a slightly different foliage look in the fall and is perhaps a bit more upright. I don't have an opinion on whether it's really smaller statured. There are other varieties reported, but we haven't acquired them yet.

Parrotia subaequalis should be a rage. It's related to *P. persica* but rare and has only been recently introduced. What's odd about *P. subaequalis* is that it was found in Eastern China, about 3,500 miles away from the natural range of *P. persica*. Another odd fact is this tree was a recent find, first characterized by Deng Xiaoping, a Chinese leader, in 1992. Arnold Arboretum had small plants in the garden in 2004. From that auspicious start, the plant has been scattered far and wide. We're contributing to that. What's sad for me is I saw the plant at the Nanjing Botanical Garden years ago but assumed it was *P. persica* and never gave it a second glance, chalking it up to Chinese nomenclature issues. I never caught it in the fall because that's

what separates the two immediately. *P. subaequalis* is a brilliant red in the fall.

We are multiplying *P. subaequalis* as fast as we can. I don't think I've ever met a plant enthusiast who didn't find *Parrotia* special, and the conversation wanders into why it doesn't make a top 10 list somewhere. I guess it's the lack of showy flowers? Maybe it's because it's so slow to get going? It's just not well known in the South and rarely encountered in the nursery trade or seen at mass markets. For whatever reason, this tough and durable tree is worthy of any well-drained, full-sun location in the Southern garden.



Parrotia subaequalis

Sedges are the New Black

By Dawn Stover

With the increasing popularity of designed plant communities and the successes we've seen with that type of design at SFA Gardens, I'm always on the lookout for plants to use in the groundcover layer. I wrote about the layers of designed plant communities in the winter 2016 edition of SFA Gardens News and outlined layers consisting of structural plants, seasonal-themed plants, groundcover plants and filler species. While the groundcover layer is typically not the showiest layer, it is possibly the most

important as it covers bare soil acting as a green mulch, keeping weeds at a minimum. Sedges are extremely useful in the groundcover layer and are gaining popularity in the perennial plant world because of that.

Sedges can easily be mistaken for grass, but they are really a grass-like plant in the Cyperaceae or sedge family. Unlike grasses, their stems are triangular and solid compared to hollow stems of grasses. Sedges are more closely related to rushes than they are to grasses and can be

distinguished from rushes that have solid, round stems. Many sedges prefer moist, shady locations, but a few tolerate some sun, while some are even drought tolerant. Some form clumps, while others spread slowly by rhizomes, and many species are native to North America. The Lady Bird Johnson Wildflower Center lists 432 species in the Cyperaceae family, which includes both sedges and rushes. I am focused on the genus *Carex*, of

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which there are at least 70 species native to Texas and more worldwide.

Sedges seem mundane at first glance, but when used en masse, they are quite spectacular. Many are best suited to the woodland garden where soil stays fairly moist, like Cherokee sedge, *Carex cherokeensis*. A handful, including Texas sedge, *Carex texensis*, thrive in dry shade, which is one the most difficult situations to garden. Their finely textured foliage is an excellent complement for broadleaved shrubs like hydrangeas, evergreens, azaleas and camellias. Although they won't withstand heavy foot traffic, dwarf varieties can be used as a turf grass alternative in heavily shaded landscapes. Clumping sedges can be planted densely, while rhizomatous varieties could be allowed to fill in garden beds among the stems and trunks of perennials and shrubs to help prevent weeds from establishing. Repetition of this element in such a manner also lends legibility to the landscape and bonds the elements of

other layers together.

In addition to the Cherokee and Texas sedges, we are looking at two native species: the white-tinged sedge, *Carex albicans*, and pretty sedge, *Carex woodii*. We are looking at one non-native species with wider, powdery blue foliage called blue sedge, *Carex glauca*. My past experience with non-native sedges hasn't been positive in our East Texas heat. I'll try anything at least once and try to kill it at least three times, so we'll see!

Finally, sedges are host to many caterpillar species, and a variety of birds enjoy the sedges' seeds. In addition to soil-holding capacity and weed suppression, sedges get high marks in the wildlife category. While deer may nibble on occasion, sedges



Texas sedge, *Carex texensis*, is used as a groundcover in the landscape at Duke University's West Union Pavilion. Photo courtesy of Hoffman Nursery

are not preferred.

Look for mass plantings of *Carex* at SFA Gardens in the upcoming months as we begin to incorporate them into the landscape. There is a small planting at the Brundrett Conservation Building using the pretty sedge as a groundcover under swamp milkweed, *Asclepias incarnata*. Look for it the next time you visit!

Pests in the Garden?

By Elyce Rodewald

Dr. Creech pretends to dislike children, referring to them often as pests in the garden. In reality, I think he really is glad they are in the gardens; they can just be a bit intimidating to him. They are full of energy and endless questions. They move erratically and could possibly crush an important plant. They don't always show respect and appropriate deference to unfamiliar men (aka Dr. Creech).

So, what are all these children doing in the gardens? They are attending a learning excursion. SFA Gardens offers a range of hands-on,



experiential-learning opportunities at the PNPC and Mast Arboretum for students in kindergarten through fifth grade. The programs are correlated to state science standards and complement what students are learning in the classroom. Our goal is to create a positive and exciting learning environment for students and teachers.

Fifth graders attend an "Adventurous Earth Science Exploration" to view ancient rocks and real-life examples of constructive and destructive forces. They

also investigate the water cycle, erosion and solar energy used at the Brundrett Conservation Education Building.

Fourth graders are “Wild About Science” as they participate in work scientists perform such as data collection, tree measurement and water analysis.

Third graders discover rare and endangered plants, investigate plant adaptations and soil, and explore native East Texas ecosystems on the “Go Wild” learning excursion.

Second graders use their observation and inquiry skills during their “Arboretum Adventure.” They take a close look at flowers, discover what seeds need to grow, locate the greatest

treasure in the arboretum and meet live pollinators.

First graders and kindergarteners attend “Bugs, Bees, Butterflies and Blossoms” where SFA elementary education interns teach action-packed lessons about forest habitats, plant and animal adaptations, and the world of pollinators. This program is an integral part of the interns’ science teaching methods course and a wonderful opportunity for them to put new knowledge into practice.

Staff members, student assistants and volunteers, called Garden Guides, lead the learning excursions. Last year, volunteers involved in education programming donated more than

963 hours to SFA Gardens. Garden Guides bring enthusiasm and knowledge, and their assistance is vital to our programs. Unlike Dr. Creech, they are not intimidated by children and seem to embrace the “organized” chaos that accompanies outdoor, inquiry-based learning.

To join this group of volunteers, contact Elyce Rodewald, research associate and educational programs coordinator, at (936) 468-1832 or erodewald@sfasu.edu. The next training is scheduled for 10 a.m. to noon Jan. 8 and 9, 2018, at the Brundrett Conservation Education Building. Join us as we change the world, one child at a time!

The Collaborative Power of Gardening with Children

By Jocelyn Moore

SFA Gardens’ weekly afterschool club, Nacogdoches Naturally, is gearing up to start the year with 21 eager students ages 8 to 12. I am amazed by the partnerships and collaborative spirit unfolding within our program.

Since its inception, Nacogdoches Naturally has partnered with the Boys and Girls Club to provide students outdoor education and adventure at the PNPC. Through the years, vegetable gardening has been a major theme in our programs. Last year, in hopes to expand our edible gardens at the PNPC, holistic design consultant Theron Beaudreau of Integrated Acres led community members in a service-learning project to build rich soil in our beds through the use of “lasagna layering” (similar to composting in place). We’ve waited patiently for the “lasagna beds” to finish cooking, and now we are ready to get to work.

First things first ... what to plant? With the help of Rachel Galan at Caddo Mounds State Historic Site, who will plant her Snake Woman Garden as a living showcase of

plants the Caddo people grew, we are sourcing native seeds from a variety of historical seed banks. Our students will help plant many of these native edibles, including elderberry, goosefoot, dewberries, Jerusalem artichokes, traditional bean, squash and more.

When students are taught how to grow and harvest their own fruits and vegetables, they are often excited to eat them. We have been pleased to see this same result at the Thomas J. Rusk Elementary School gardening program.

Staff members and students are looking forward to learning how to cook the fruits of their labor. Thanks to another example of community support, Texas A&M AgriLife Extension Service generously provided



Ingrith Lopez-Santiago delights in edible rosebud flowers from last spring while standing in front of the beginning stages of a natural playscape at the PNPC, which is for children to explore and interact with their outdoor environment.

gardening and culinary supplies for the program this year. Our vision is to empower students to make healthier choices by learning about the origins of their food and delicious ways to cook and prepare their harvest. We look forward to sharing updates of our exciting year of gardening, cooking and outdoor adventure!

Color Garden Foodscape

By Jordan Cunningham

With the pleasant temperatures we have been experiencing lately, it's no surprise that visions of cool weather crops have started dancing in my head early this year. When we started thinking about pulling new seeds and replacing summer-heat-loving crops, we also started looking at new ideas for our Color Garden, which is located behind the greenhouse off Wilson Street and behind the Agriculture Building. Every season we display our brightest, seasonally appropriate plants to create a rainbow garden. It's the perfect place to appreciate all the shades Mother Nature has to offer.

We use mostly annuals, so we spend a good amount of time in the Color Garden when the weather starts to change. In the winter, many of the plants we use are from the

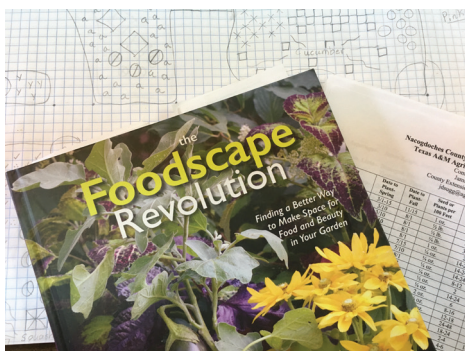
brassica family like broccoli, collards and kale, but we also use some flowering plants.

Using edibles and ornamentals in the same landscape is called a foodscape, a term Brie Arthur coined. Arthur was our guest speaker at the Theresa and Les Reeves Lecture Series in May. She authored the book "The Foodscape Revolution," in which she gives great ideas for foodscaping in residential areas and provides helpful tips on creating your own foodscape. Inspired by Arthur's book and lecture, we decided to transform the Color Garden into a full foodscape.

Measurements were taken, and we started a new design to implement. We began with a list of our favorite annuals and added edibles like Swiss chard, rice and peas. Then we looked

at our existing perennials and decided to include *Cuphea* and *Monarda*.

Since we are sharing our original space with more edibles, we decided to sort our plant materials by color. In the summer, our bed No. 1 will have 'Royal Cosmo' *Lantana*, yellow Italian cooking peppers and *Coreopsis*. Bed color: yellow! In the cooler months, our bed No. 4 will contain *Aesculus pavia*, 'Prima Rosa' Swiss chard and red snapdragons. Bed color: red! Our future Color Garden will be a beautiful mix of edibles and ornamentals, annuals, perennials, beautiful flowers and bright leaves. Most of our designs are still on paper, but they are looking good. We hope to upgrade our new and improved Color Garden Foodscape after our fall plant sale. We would love for you to come and check it out!



Brie Arthur, writer of "The Foodscape Revolution," served as a speaker at the Theresa and Les Reeves Lecture Series in May. Her book and lecture inspired SFA Gardens to transform the Color Garden into a full foodscape.

Be a Friend

By Anne Sullivan



If you are receiving this fall newsletter, you are probably a past SFA Gardens member. At this time, we are seeking new and

returning members for the upcoming 2018 membership year. SFA Gardens needs your support to continue its goals to provide outdoor educational programming for families and afterschool programs for elementary and middle school students.

Membership funds continue to

support education and interpretation in the Gayla Mize Garden, Jimmy Hinds Park, Kingham Children's Garden, Mast Arboretum, PNPC and Ruby M. Mize Azalea Garden.

Membership benefits at a \$50 or higher level include membership to all of the gardens, early notification

of special events, quarterly issues of the newsletter, discounts to garden seminars and affiliate garden discounts at the Lady Bird Johnson Wildflower Center in Austin. Other opportunities are available based on membership levels.

Members joining at the Supporting (\$250), Friend (\$500), Sponsor

(\$1,500) or Patron (\$5,000) levels have the added option of attending the presales for the fall and spring plant sales each year.

If you are a friend already, thank you for your continued support of this outstanding natural resource in our community! If you have gardening friends or neighbors who are not

members, please share your newsletter with them and encourage them to become friends of SFA Gardens.

Anyone interested in learning more about becoming an SFA Gardens member can contact Anne Sullivan, SFA Gardens program associate, at (936) 468-4129 or sullivanfa@sfasu.edu.

Upcoming Events



OCT. 7: FALL PLANT SALE

Shop for hard-to-find, "Texas-tough" plants, including Texas natives, heirlooms, perennials, shrubs and trees, with an emphasis on pollinator-friendly natives and exclusive SFA introductions. The sale runs from 9 a.m. to 2 p.m. at the PNPC, located at 2900 Raguet St.



OCT. 12: THERESA AND LES REEVES LECTURE SERIES

Hear Rebecca Turk, education and events manager at Moore Botanical Gardens in Lake City, South Carolina, discuss "Moore Farms Botanical Garden: A Germinating Success from Concept and Collections to Programs."

NOV. 4: GIFTS FROM THE GARDEN — CREATING HERBAL SOAPS

Learn how to use the cold press method to make soap with natural oils and ingredients from an herb garden from Elyce Rodewald, SFA Gardens research associate and educational programs coordinator, from 9 a.m. to noon at the Brundrett Conservation Education Building. The seminar costs \$25 for SFA Gardens members and \$30 for non-members.



NOV. 9: THERESA AND LES REEVES LECTURE SERIES

Join Andrew Bunting, assistant director of the Chicago Botanical Garden in Chicago, as he presents "Magnolias: Queen of the Garden."



DEC. 2: DECK THE HALLS — CREATING EVERGREEN DECORATIONS FOR THE HOLIDAYS

Design beautiful holiday wreaths and hangings with Dawn Stover, SFA Gardens head grower, using materials from Mother Nature from 9 a.m. to noon at the Brundrett Conservation Education Building. Learn principles of wreath, garland and centerpiece construction, and make a wreath to enjoy at home for the holidays. The cost is \$25 for SFA Gardens members and \$30 for non-members.



DEC. 14: THERESA AND LES REEVES LECTURE SERIES

Listen as Dr. David Creech, SFA Gardens director, reminisces with "The Year in Review: Surviving a Career in Academia with No Permanent Injuries."

Lecture series events listed above will begin at 7 p.m. in the Brundrett Conservation Education Building. Lectures are free. A drawing for plants from SFA Gardens will follow.

For more information, call (936) 468-4129, or email sfagardens@sfasu.edu.



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WITH US.

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*“Planting a garden with food potential is one of the
most valuable things we can do.”*

– Isabell Shepard



“Thomas J. Rusk
Garden Buds”
harvest their bounty
from the garden.