

Newsletter of the ISA Texas Chapter Late Winter 2022







Take me deep in the wintry woods where hope glitters freshly worn."

—Angie Weilan-Crosby Hola and Happy New Year,

Whew—we made it through another crazy year, and 2022 is already off to a crazy start! With the unpredictable becoming an unfortunate new normal, ISA Texas is moving ahead with a full schedule of trainings and opportunities at all levels of learning and experiences.

A fitting end to the year of 2021 was an actual in-person ISA Texas Annual Retreat in College Station this past December. At the retreat, the Board did a review of the previous year's activities and goals. It is amazing to realize that the efforts by ISA Texas Staff, Board and Committees produced 47 On-Demand Webinars for members to access. As of the first week of January, there were over 1,250 webinar attendees!

If you are not keeping up with the ISA Texas calendar of events, you will be missing out on great training opportunities. (Example: the TRAQ course in Austin, January 24-25 is full) Looking ahead, here are some training opportunities to put on your calendar: the NTUFC (in Hurst, TX on February 16th), the Bilingual Tree Worker Training (in San Antonio on March 3rd), a Tree Diagnosis Workshop (in College Station on March 14-15th), and the Women's Climbing Workshop (at the beautiful Texas State University Campus in San Marcos on April 22-24th.)

Other events and training opportunities still awaiting confirmation dates include: Oak Wilt Qualification in Glen Rose and Fredericksburg, TRAQ Renewal – Houston, and a much-anticipated Master's Series Pruning Workshop.

Not only is ISA Texas working to provide training and educational events, there is also an ISA Texas Day of Service scheduled for January 29th in Seguin. ISA Texas members will gather to prune the Ranger Oaks which are featured in the book: Famous Trees of Texas, Centennial Edition by Gretchen Riley and Peter Smith. A part of the day of service there will be diagnostic services provided to assess the condition of the trees (and based on the diagnosis) recommended treatments will be provided. Limbs pruned from the trees will be collected by the Texas Rangers to make commemorative pistol grips in recognition of the 200th anniversary of the Texas Rangers.

On top of all the events, trainings, and activities mentioned above, this February 1st and 2nd, a Strategic Planning Committee will meet in San Antonio to work on the 2022-2025 ISA Texas Three-Year Plan. These Strategic Plans are where ISA Texas Board sets goals and priorities to ensure our members are provided the highest level of training and the latest research by the leaders in Tree World at the state, national, and international levels.

If you have suggestions and ideas for ways ISA Texas can serve you, our members, by providing services, events, and training opportunities please share them with us by email at: <a href="mailto:isatexas.com">isatexas.com</a>

Wishing y'all a great start to the New Year!

Mark

### **Editor's Note**



Greetings, fellow Tree People!

Woo hoo—welcome to 2022!! Here on the Gulf Coast, we've had a mix of Wintery days and Spring-like days; it almost makes me forget that it's still Winter. In fact, I'm constantly resisting the urge to plant seeds in the soil—beans, squash, and peas. I keep reminding myself that it's still too early to put warm-season veggies in the ground!

In our first issue of the year, check out tree-related goodies, including Texas A&M Forest Service's "Healthy Trees, Healthy Lives" program on page 12 and a recap of the TRAQ Renewal Course on page 13. Also, take a look at the "2022 Events Update" on page 6 and mark your calendars for the exciting events and classes this year. Be sure to "leaf" through the rest of this issue for Upcoming Events and other goodies. Thank you to everyone who contributed to this issue and to those out there reading it. Enjoy the transition from Winter to Spring!

Sincerely,

Heather McKnight

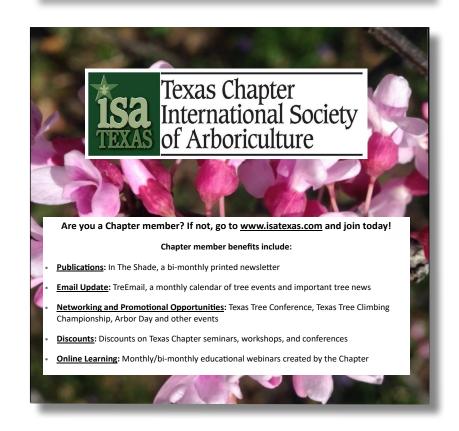


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# In the Shade

is published six times a year by the Texas Chapter, International Society of Arboriculture.

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**Late Winter 2022** 

Vol. 45, No. 5





## On the Cover

The white bark of American Sycamore (Platanus occidentalis) glows in the winter morning light.

# **New Members**

A.1. C. 4	A (* 17137
Adrian Santos	
Jonathan Watt	Houston TX
Christopher Carpenter	Waxahachie TX
June Alderman	Midland TX
Ryan Davis	Montgomery TX
Jose Garcia	San Antonio TX
Ashleigh Pettus-Mitchell	Austin TX
John Francis	Shiner TX
Justin Whisenant	Kerrville TX
James Nichols	Lufkin TX
Omar Perez	Victoria TX
Carlos Rendon	Mercedes TX
Any Moucha	Austin TX
Quinton Jones	Springtown TX
Skip Kincaid	Saint Louis MO
Thomas Coleman	Fort Gibson OK
Anthony Williams	Lewisville TX
Brandin Chalker	Bulverde TX
Ethan Myers	Splendora TX
Jacob Taylor	Marble Falls TX
Bacilio Alcala Jr	
Hunter Guzman	Del Valle TX
Steven Wielgosh	Cibolo TX

# 2022 Events Update

There is a full slate of "In-Person" and "Virtual" educational opportunities being offered. The full Tree Risk Appraisal Qualification (TRAQ) in now offered on a quarterly basis. While the TRAQ renewal will be offered in both in-person and virtual options.

We will again have the Texas Oak Wilt Qualification (TOWQ) both in-person and virtually. We are adding a virtual TOWQ renewal course. The "Tree Diagnosis from Field to Lab" will be held on the Texas A&M campus. The ISAT education committee has put together new workshop; "The Science of Pruning." We plan to offer the Wildfire Risk Reduction Qualification again this year. The Women's Tree Climbing Workshop will be offered at the Texas State University Campus in Wimberley. After last year's successful "Intro to Entomology" online series, we are planning a similar online "Tree Pathology 101" series.

#### **Next Steps:**

- 1) Mark your calendars NOW!
- 2) Renew your ISAT membership (Registration links emailed directly to members first)!
- 3) Look for the registration link 6-12 weeks before the event!

Oak Wilt Qualification 3-Year Renewal
•
Full TRAQ - Austin
NTUFC – Hurst Convention Center
Bilingual Workshop – SAAA - Shertz
Tree Diagnosis Workshop – College Station – Limited to 24
The Science of Pruning – Georgetown – Limited to 100
TRAQ Renewal – Houston – Limited to 30
ГRAQ – Houston – Limited to 20
April (TBA)
Women's Climbing Workshop – Wimberley – Limited to 20
Texas Oak Wilt Qualification – Glen Rose – Limited to 25
Texas Oak Wilt Qualification – Virtual – Limited to 25
TOWQ renewal – Virtual
Texas Oak Wilt Qualification Fieldwork for Virtual - Fredericksburg
Oak Wilt Qualification – Fredericksburg – Limited to 25
TRAQ – Dallas – Limited to 20
Tree Pathology 101 with Dr. Appel (TBA)
ISA Annual Conference
Texas Tree Conference - Waco



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## February's Deadly Freeze Gives Rise to Zombie Trees Across Texas

By Diane Cowen, staff writer San Antonio Express-News

Zombies are in your yard, in parks and along roadsides and other green spaces throughout Texas.

They're trees that are partly dead and partly alive, struggling to move forward and waiting for the next big thing — even hotter temperatures, a drought, a hurricane — to seal their fate.

Count zombie trees as one more lingering effect of February's winter storm.

Arborists and other tree experts say that in the months to come, the state could lose thousands if not millions of trees ranging from tall Mexican or California fan palms to a wide range of hardwoods such as lace bark elm, Chinese tallow and water oak. This would be the most dangerous threat to Texas's tree inventory since the 2011 drought.

Trees with lots of dead branches and new green sprouts shooting out of the center are likely zombie trees. Even tall palms with new green fronds on top could be zombies, because you can't see the potential damage inside of their lanky trunks.

Matt Petty, assistant district manager and a certified arborist at the Davey Tree Expert Co., said that the International Society of Arboriculture is calling for a two-year watch on trees damaged in the freeze.

"The zombie tree concept comes from trees that, from a distance, appear to be normal or healthy and as you get closer, you see the differences. They're dead and we don't know it yet," Petty said, noting that the trees could have been struggling before the freeze.

"Trees that lost their leaves from the freeze have sprouted out and, in many cases, look like they have recovered. As temperatures heat up, though, we'll have trees that die."

Petty said that he's seen sycamores, rain trees, Chinese tallow, elms and water oaks suffering damage, but live oaks and magnolia trees — both popular

shade trees in the Houston area — are doing well.

The freeze affected trees' cambium layer — essentially their vascular system — just beneath the bark. That layer is responsible for taking water up to the branches to be converted to sugars through photosynthesis. If a tree is so damaged that it cannot do this, it cannot feed itself.

Summer's worst heat — when a tree needs to be able to replenish water and nutrients the most — will start wreaking havoc on trees.

"As it continues to warm up, a large number of trees and shrubs that we thought had recovered will die," Petty said.

Barbara Fagan is one of Petty's clients who removed a zombie tree — a river birch — and another damaged tree, a redbud, from her yard. Three holly trees took their place.

"It had a little bit of green on it, but it was losing more and more branches all of the time," Fagan, who lives on the city's west side, said of her river birch.
"There's a lot of really not attractive trees hanging around town."

Petty urged her to take both trees out because they were more dead than alive and could cause unwanted damage if they toppled from a tropical storm or hurricane.

David N. Appel, a Texas A&M professor and a specialist in tree pathology noted that "zombie tree" isn't a horticultural or agricultural term and showed restraint in using it.

He said that most trees with deadlooking branches and new shoots coming from the center could be zombie trees, but not all are. They're certainly damaged trees, some of which will live and some of which will die, and it's fairly obvious which branches should be pruned back.

"I've been from the Rio Grande all the way up to Wichita Falls, and I have talked to a lot of arborists and one thing



Matthew Petty, with Davey Tree Expert Company, talks about the various signs of a "zombie tree" on Thursday, July 22, 2021, in Houston.

## Signs Your Trees Are in Trouble

**Dead branches:** If your tree has older branches that are completely without leaves or other foliage, have them pruned off

Fungus: Look for fungus growing on the outside of the tree.

**Leaves and foliage:** If your tree is still without leaves, it is probably dead. Another sign it's dead is that bark is peeling from its trunk. These trees - especially larger ones - should be removed.

**Palms:** Many tall California and Mexican palm trees are sprouting new fronds or fan palm leaves. Still keep an eye on these, as some have died, bending over from the center to the top of the trunk.

is clear: The damage was remarkably similar, it's just that the species were different depending on where you are," Appel said. "In one place you hear a lot about lace bark elms, but in another place it might be some of the oak species. In Wichita Falls it was the Japanese black pine and Mondell pine."

Appel said Texas will lose hundreds of thousands, possibly millions, of trees.

"The picture has become much clearer than it was two months ago, but we still (won't know the fate of) a lot of these trees for a long while," he said. "We aren't out of the woods yet, and that's not a tree joke."

The 2011 drought prompted the loss of 40,000 trees in Memorial Park. Conservancy president and CEO Shellye Arnold and forestry supervisor Eric Hollenbeck both said that they've worked hard to restore the 1,500-acre Houston park to its natural state — a grassland prairie — by removing nonnative plants and trees. New plantings, primarily natives, fared better in the freeze.

Tree experts at the city of Houston and Mercer Botanic Gardens in Harris County Precinct 4 both said they're watching trees closely, removing them when they need to.

Jeremy Burkes, urban forester with the Houston Parks Department, said the loss of palm trees after the freeze was quick and visible. In a single week in May, city workers removed 23 trees that uprooted and fell over after heavy rains. "We've already had a number of large mature trees completely fall over, comparable to what you would see in a hurricane. Trees of this size don't just fall over, so we think it had to do with the freeze," Burkes said. "If we have a drought and a hurricane, it's going to be a lot worse."



Texas will lose hundreds of thousands, possibly millions, of trees "

— David N. Appel

For now, Burkes and his team monitor city parks, looking for trees that are without foliage or with a significant amount of dead wood, a sign they're in decline.

Chris Ludwig, Mercer's executive director, said he and his staff have watched the trees on their property closely. Pines that lost their needles are pushing out new ones, and most trees are rebounding.

"Our trees that are suffering are trees that were suffering prior to the freeze. They were in a weakened way already, older trees," Ludwig said. "Water oaks and other hardwoods are in danger. The Chinese tallows are struggling, but they're an invasive species so we can stand to lose some of those."

Ignoring damaged or zombie trees puts you, your home and your belongings — and maybe your neighbors, too — at risk during storms.

Homeowners can start by assessing their yards, looking for dead branches, peeling bark, fungus or any other sign that a tree is having problems. An ISA-certified arborist can assess a zombie tree and determine if the tree requires pruning or removal.

The problem won't be over when 2022 arrives, since the effects of freeze and drought can take years to manifest.

"Freeze damage will initiate heart rot problems 15, 20, 30 years from now. That takes decades to develop," Appel said. "We've got that problem and we've got dead branches that are going to begin to decay ... and become dangerous if a high wind comes along."

As much trouble as shade trees are in, arborists are just as concerned about the more decorative palm trees still standing.

Dustin Beck, arborist and owner of Houston Tree Surgeons, compared palm trees to very tall bundles of millions of pieces of straw. With the 2021 winter

**>>** 

storm, the water inside them froze and thawed and may be fermenting and decaying inside. One day, they'll just die, falling to the ground or bending over near the top or middle of the trunk, seemingly without warning.

"All palm trees are transplants — none of them are native," Beck said. "They are in serious danger of falling over."

For safety reasons, Petty said that his employer has put a moratorium on climbing palm trees to prune dead fronds. If they can't reach the top with a lift truck, they won't deal with the tree.

"I've seen palm trees that on one day look healthy with green fronds and a couple of days later, the whole tree bends over like a shepherd's crook. The trunks look solid, but because of decomposition and fermentation, they're turning into mush," Petty said. "I'm hearing

reports of that all over Texas. San Antonio and Austin are both seeing it, and we're seeing it in Houston, too. As the temperatures warm up, you're going to see palms become a greater risk."

David Mauk of the Jones Road Tree Service said his crews have removed more trees this year than any in his company's history. He urges homeowners to hire professionals and launch a tree preservation plan for how to feed, water and prune their trees.

"I'm seeing more issues every week. I'm not a scorched-earth policy arborist, but if you have a tree with 50 percent canopy loss, you should remove it," Mauk said. "As it gets hot and dry, you'll see more (problems). Heat brings on stress and if we get a drought this summer, you'll see an epic tree loss in Houston."

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Above: Example of a zombie tree that looked like it was recovering from Winter Storm Uri but died suddenly.

Photo Courtesy of Matt Petty

Left: Fungus like hypoxylon can be one of the factors that can contribute to a tree becoming what is referred to as a "zombie tree" - a tree that otherwise looks healthy, but is actually dying and will not recover. Usually a tree is initially weakened by a stressor, such as construction or an event like this winter's freeze, which makes it more susceptible to fungus and bugs that feed on the dying tree. The tree can appear healthy from below, but the branches are weakening and dying inside, according to Petty.

Unless otherise noted, photos are by Mark Mulligan, Houston Chronicle / Staff photographer.





By Gretchen Riley

# Texas A&M Forest Service Update "Healthy Trees, Healthy Lives: Geospatial Analysis of Communities"

We are collectively becoming more aware that being around trees or even just having views of trees is positively correlated to physical and mental health. To that end, Texas A&M Forest Service compiled a set of findings relative to community trees and human health through an extensive literature review.

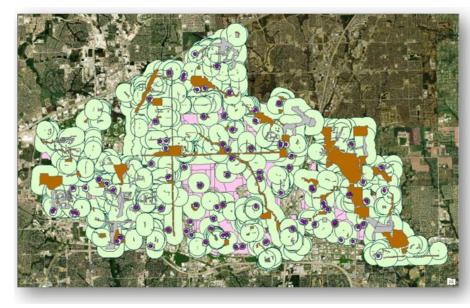
We are now performing Healthy Tree Healthy Lives (HTHL) geospatial overlay analysis for communities which

analyzes the spatial distribution of urban tree canopy (UTC) relative to residential neighborhoods, greenspaces, commuter routes, and key facilities such as hospitals, care centers, and schools (HMS) to help decision makers make informed decisions regarding community forestry activities and optimizing public health benefits.

Right: This map image depicts the gap analysis; pink indicates neighborhoods greater than 500 meters from a park or greenspace.

In the analysis we:

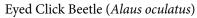
- Calculate UTC within rights-of-way (ROW) of nonhighway or access road streets (55-foot buffer).
- 2. Calculate UTC within 200 meters of all HMS
- 3. Identify residential neighborhoods or portions of neighborhoods that are 500 meters or further from parks or other greenspaces.



# Texas Tree Critters



Photo was taken on a Lacebark Elm (Ulmus parvifolia) in League City, TX.



- Adult beetles reach about 2 inches in length
- Marked with prominent oval "eye
- "Click" (or snap) their thoracic segments to flip over
- Can "play dead" by tucking in their antenna and legs close to their
- Feeds on: Larvae (referred to as "wireworms"): can sometimes damage roots and/or tubers of small plants; Beetles: nectar





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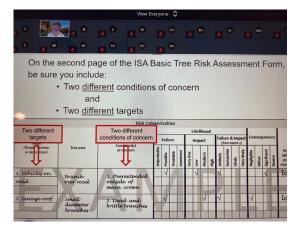


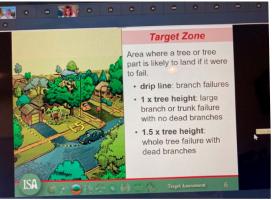
#### Tree Risk Assessment **Qualification Renewal** Class – Virtual, with Skip Kincaid

By Misti Perez

This past December, the Texas L Chapter ISA in conjunction with the Southern Chapter ISA, offered the inaugural Tree Risk Assessment Qualification renewal class virtually to 25 attendees. The class was offered via Go-To-Meeting, and the duration was 5 hours. Attendance was taken by having attendees text a picture of themselves holding their photo ID to the instructor, then turn off their cameras, mute themselves and use chat to interact with the instructor. There were review questions periodically to engage attendees and take attendance. After the practical instruction portion of the class, ISA emails each participant and allows them 90 days

portion of the exam with a Pearson Vue, online testing center. Before scheduling the written portion, the attendee must print the ISA TRAQ form and instructions and perform an in-person tree risk assessment on their own time. Upload the forms along with 5 photographs of the tree assessed to ISA, then you are eligible to schedule the written portion of exam. The written portion is overseen by a proctor using your computer, is one hundred questions with a two-hour time limit and you must receive 75% or higher to pass. After completion of this step, you may log into your ISA dashboard to check if you passed or failed. The Texas Chapter plans to offer this qualification renewal class again later this year.





# **Member Spotlight**

#### ZL "Stick" Lamar

Why did you decide to join the Texas Chapter ISA? When I joined, there were very few guidelines for proper arboriculture techniques. Even climbing spurs were the norm for climbing trees. My neighbor and good friend, Greg David, former ISAT board member and president, and I would discuss "leveling the playing field," where it came to industry standards. That's when we decided to join the Texas Chapter ISA many years ago. I have a forestry degree at Stephen F. Austin and a doctorate in chiropractic. I started my tree care company to pay for chiropractic college and I realized I liked it so much that I just stayed in the tree care industry. You'd be surprised

# What is something you love most about our industry and/or feel is very valuable?

how much medical terminology can be utilized when

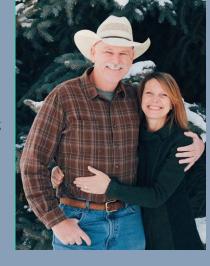
communicating arboricultural practices!

For folks getting started in tree care, there will always be opportunity if you treat your customer fairly, know what you're doing and act in a professional manner. All my work is commercial but if someone wants to break into residential tree care work, you can always do that because the opportunity is always there. You can't allow the business to own you, you must be deliberate in your

actions and try your best to separate your work from your time off. It afforded me the life I live today with money, freedom, and opportunity. If you don't get into this business for the wrong reasons (convenience or money), then the sky's the limit.

Share a favorite hobby many people may not know about you or a fun fact.

I'm an avid



outdoorsman. I love to hike, hunt and fish and hang out at our ranch in Coleman County. For four years, I was a Wildland Firefighter for the US Forest Service, stationed out of New Mexico with a couple interregional Hotshot crews and I really enjoyed that. My wife Angelika is Austrian and we travel there to visit her family and go hiking in Europe as often as we can. When I retire, we plan to spend some summers in the Austrian Alps with her family and re-vamp their family farm.

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# The Value of Real Christmas Trees in Texas

Christmas trees have been a tradition in the United States for over a century and today, when most families begin searching for the perfect Christmas tree, it comes down to one question – real or artificial? While there are many pros and cons to having a real or artificial tree during the holiday season, one thing is certain – real Christmas trees add great value to both the national and state economies.

"There's just something special about having a real Christmas tree around during the holidays," said Aaron Stottlemyer, Texas A&M Forest Service Forest Resource Analyst. "Not only are they beloved for the authenticity they bring to celebrations, but they add so much value to our economy and benefit the environment."

When it comes to Christmas tree farms, many might think of northern states, covered in white, glistening snow. Actually, Christmas trees are grown in all 50 states. According to the National Christmas Tree Association, almost 350 million Christmas trees are currently growing on 15,000 tree farms across the country, covering 350,000 acres.

For the Lone Star State, Dr. R. R. Childers was the first on record to plant Christmas trees in 1935 in Jasper, Texas. And since the 1970s, entities such as Texas A&M Forest Service, Texas A&M University and Stephen F. Austin University have been working on growing optimal species in the state to increase production and sales for Christmas tree growers. The most commonly grown trees in Texas are Virginia pine, Afghan pine, eastern redcedar, shortleaf pine, Arizona cypress and Leyland cypress.

These species thrive in Texas soils and tend to be hardy, fast-growing trees. They also contribute to the state's economy, by providing jobs and income to Texans.

Artificial trees made of PVC plastic became fashionable in the 1980s, but even as they have grown in popularity over the last 40 years, real Christmas tree sales remain higher across the nation. On average, Texas sells over four million real Christmas trees per year, about 12% of the U.S. total. And while you can purchase trees from large retail stores, many tree sales come from local growers.

"Texans can take pride when purchasing real Christmas trees," said Stottlemyer. "By purchasing real Christmas trees, they are supporting local growers and benefitting rural Texas economies."

Texas A&M Forest Service recently conducted an economic study showing just how much value the real Christmas tree industry adds to the state. Including total direct impacts and all other ancillary industry activities, in 2020 the Christmas tree industry generated over \$800 million and supported nearly 7,000 jobs with a payroll of \$260 million.

When contrasted with artificial Christmas trees, the nation and state do not see nearly the economic benefits as provided by real trees, as they are largely manufactured in foreign countries.

"Unlike artificial Christmas trees, the real Christmas tree industry has a continuous cycle of economic benefit for our state," said Stottlemyer. "There is a significant domestic economic impact from real Christmas trees considering that they are planted, managed, harvested, processed, transported and sold only to start the entire cycle again by planting new seedlings each year."

How do these numbers rank compared to other states? In 2019, the U.S. Bureau of Labor Statistics estimated the Texas





Christmas tree industry ranked second in the U.S. South for average annual employment and wages behind Florida, and fourth nationally after California, Florida and Oregon.

Not only do real Christmas trees add value to our state economy, but they also benefit our environment. Much like forests, Christmas trees growing on tree farms reduce soil erosion, improve water quality and provide habitat for wildlife.

Like other trees, Christmas trees also add value to our lives by sequestering carbon, producing oxygen and cleaning the air we breathe. Similar to having plants or fresh cut flowers around, real trees also help boost energy and mood and decrease mental fatigue - which can be much needed during the rush of the holiday season.

"Purchasing real Christmas trees is purchasing a renewable resource," said Stottlemyer. "Real trees provide numerous environmental benefits and are a true green option to enjoying the holidays."

Real Christmas trees are both renewable and recyclable.

Many communities provide opportunities to recycle trees. Trees can easily be mulched to be used in yards, around the bases of trees or in gardens to help prevent soil erosion and compaction. Trees can also create habitat for wildlife or fish if placed outdoors or in ponds.

Real Christmas trees add real value to the Texas environment and economy, and to Texans' health, jobs and local businesses.

To read the full Texas A&M Forest Service report on Christmas tree industry economic contribution, visit <a href="https://">https://</a> bit.ly/3avT8GB.

Texas A&M Forest Service Contacts: Aaron Stottlemyer, Forest Resource Analyst, 979-458-6630, astottlemyer@tfs.tamu.edu Communications Office, 979-458-6606, newsmedia@tfs.tamu.edu

# Fire Blight of Ornamental Pears

By Sheila McBride and David Appel

Tire blight causes vascular wilt in many varieties of pome T trees (apples, pears, and ornamental pears) and members of the Rosaceae family (a wide range of trees, shrubs, herbs, and ornamental plants such as roses, strawberries, figs, and mulberries). With vascular wilt diseases, pathogens block the water-carrying (vascular) system of the plant, causing the leaves, stems, and branches to wither, weaken, and die.

One of the most destructive diseases of commercial apples and pears, fire blight is also a serious disease of the popular

ornamental Bradford pears used in many Texas landscapes (Fig. 1). Other common Texas woody ornamentals affected by fire blight are loquat, cotoneaster, and pyracantha. Symptoms



- Infected flowers become watersoaked (translucent and wilted), shrivel, and turn brown.
- Leaves progressively turn brown, develop black blotches, curl, and eventually shrivel.

- Twigs wilt from the tip downward, turning black and curling in a "shepherd's crook," giving them a burnt appearance (Fig. 2).
- Branches develop dark, sunken cankers that enlarge and girdle the branches. Eventually, the branch dies (Fig. 3).

#### **Cause and Environmental Factors**

The bacterium, Erwinia amylovora, causes fire blight. The



Figure 2 (above): Shepherd's crook symptoms of fire blight in in young twigs. Source Sheila McBride.

- over-winters in cankers, budscars, and branches:
- forms an ooze that attracts insects, including bees, that then spread the bacteria via the nectarthodes (openings at the base of flowers);
- also spreads by rain, which splashes onto the bacterial ooze and causes new infections; and
- infects new, tender, succulent twigs and leaves.



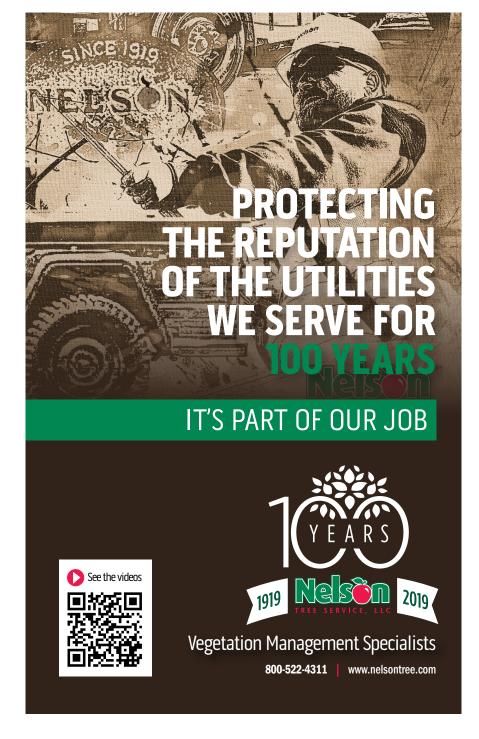


Figure 3 (above): Burnt appearance of Bradford pear twigs. Source Sheila McBride.

#### Control

- During winter dormancy, use sanitation pruning to remove infected wood:
  - Cut an infected branch 4 to 6 inches below the visible injury or canker.
  - To avoid spreading bacteria during pruning, sanitize the pruning tool before each cut, using a 10-percent bleach solution (one part bleach to nine parts water).
  - To prevent rust, dry and oil tools after using them.
- Reduce excessive succulence by avoiding extreme fertilization and watering.
- Plant moderately resistant varieties.
- Reduce new infections by spraying an antibiotic such as streptomycin sulfate (Ferti-lome® Fire Blight Spray) on flowers or shoots before the bacteria infect them. A copper sulfate fungicide (Bonide® Copper Fungicide) is also an option when applied several times while the blossoms are open. (Neither option will eliminate all new infections or those already existing in the wood.) Refer to product labels for proper rates and use.

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Source Sheila McBride.

Figure 1 (above): Typical signs of

fire blights on a Bradford pear tree.



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# What's the Big IDea?



# Can You Identify this Texas Tree?

If you know this tree, look for the photo on our Facebook page and correctly identify it in the comment section under the photo, using the full scientific name and one or more common names. If you don't know it, check the page for an answer in a few days. The winner gets bragging rights and the chance to submit a tree to stump fellow arborists in the next issue.

Hint: Has a very similar "cousin" whose leaves are not deciduous.

#### LAST MONTH'S TREE ID



Winter 2021 winner was Doug McLean.

Tree was: Limber Pine (*Pinus flexilis*)

This issue's challenge was provided by Courtney Blevins.