

ARLINGTON CONSERVATION COUNCIL

POST OAK

ACC WORKS TO PROTECT ARLINGTON'S NATURAL ENVIRONMENT THROUGH EDUCATION,
COMMUNITY SERVICE, AND ADVOCACY FOR A SUSTAINABLE FUTURE

VOLUME 19, NUMBER 2

MARCH 2017

www.acctexas.org

March Meeting

Solid Waste Management in Arlington: An Overview

Vince Hrabal,
Municipal Services Manager, Republic Services, Inc.

and David Hildreth,
Division Manager, Arlington and SE Landfills,
Republic Services, Inc.

Aby assisted by Jennifer Shaver,
Environmental Programs Coordinator,
City of Arlington

Wednesday, March 1, 7 pm
Fielder Museum, 1616 W. Abram St
(corner of Fielder and Abram)



Bring Something for the Raffle

Bits & Pieces

Ants in our plants?

It's pretty clear that the natural world is complicated, even in the messy corners of our Arlington backyards. One great example is the group of spiders that mimics ants through appearance and behavior. They may use color and shape, even markings to give the impression of three body segments. Then add ant-like behavior: walking slowly on three pairs of legs while waving the front pair around like antennae. No webs here, just wandering and hunting. Some even mimic velvet ants, which are actually wasps.



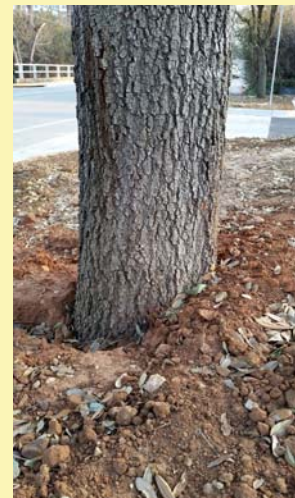
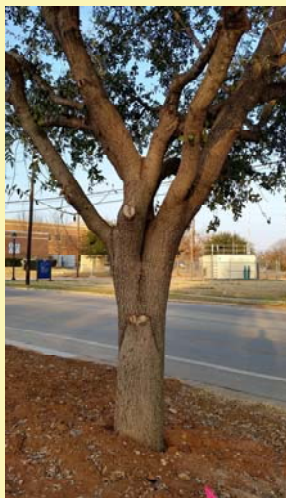
Today's inspirational moment

To save every cog and wheel is the first
precaution of intelligent tinkering.

Aldo Leopold

Buried Alive, But Why?

Professionals dumped three or four inches of bad dirt against the trunk of this live oak and raised the soil level all around it. Why? Stay tuned and we'll see what happens. Want to guess?



From the President Jan Miller

The Texas legislature is in session. As Luke Metzger reminded us last month, despite the current political grimness at national and state levels, the opportunities to access state law-making processes are still feasible. Thanks to Luke's Environment Texas group and its eight coalition partners that form Alliance for a Clean Texas, it's even easier with their weekly email legislative summaries and call-in conferences. Sign up at www.acttexas.org.

So far, legislative committees have been formed and organized and bills are being drafted and submitted. The process is starting to pick up speed with the deadline for filing bills coming up on March 10. After that, bills will be discussed in committees, and successful bills will be voted out of committee. April and May will be the crucial time to follow important bills and to contact our legislators. Stay tuned!

Remember ACC's March 1 meeting — and don't forget to invite a friend or neighbor. Thanks!



THE POST OAK

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Thanks A.C.C. for working to
conserve Arlington's
natural resources.

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Blackland Prairie Nature Preserve photos by Wes Miller

...the joy of prairie lies in its subtlety. It is so easy — too easy — to be swept away by mountain and ocean vistas. A prairie, on the other hand, requests the favor of your closer attention. It does not divulge itself to mere passersby.

Suzanne Winckler



Wildscape Update *Marylee Thomason Photos by Ann Knudsen*

Make the Wildscape Great Again!

Administrations change. Retiring Frank Rivera will always be remembered for his huge support of the wildscape and Molly Hollar's vision. Stalwart Martin Sanchez remains in the post of park manager, and Paul Kelso has joined the cabinet as lead landscape supervisor for the North Parks Department – West Division. Fortunately, Veterans Park is included in the 10 parks he supervises. Paul accepted the post even though he was not able to choose his own staff. He and his tremendous crew — Manuel Flores, Greg Glosscock and Jeff Skoog — have each logged 25 years with Arlington Parks and Recreation.



Left to right: Manuel Flores, Paul Kelso, Greg Glosscock hard at work.

In just the first month they have moved and replaced benches, begun repairing fences and trimmed the fields of coralberry. Jeff expressed a particular thrill to be working in the wilds again after a tour elsewhere.

Demonstrating his political acumen, Paul will work Wednesdays so volunteers and parks staff can share the effort and enjoy the progress.

The wildscape super PAC, the Native Plant Society of Texas, has stepped up again. It not only made a generous donation but asked representative Jose



Jeff Skoog trimming the coralberry.

phine Keeney if there was anything specific the wildscape needed.

"Why, yes," she said. "We could use a battery-powered hedge trimmer." Done. Thank you, Josephine.

Volunteer leader Ann Knudsen has (legally) solicited a bid for kiosk replacements from artist duo Mike and JoAnn Kolanko. They have a reputation for fine work and fine prices, but the wildscape is special.

A groundswell of garden-glove voters all wearing their best pins, hats and t-shirts, plus the park board's swing to the south with the assignment of Paul Kelso to Veterans Park, makes us optimistic that the proposal will be favorable.

Mini Classes at the Wildscape

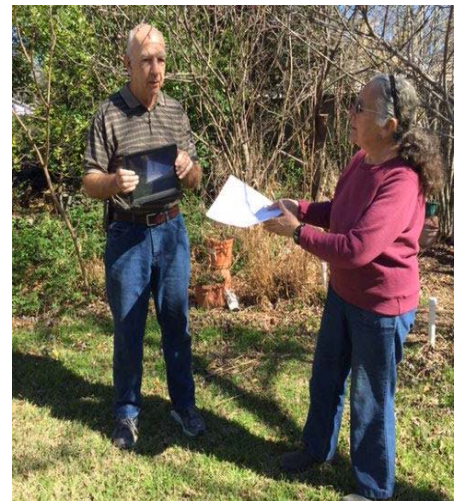
Queen of the butterflies Josephine Keeney gave a moving February mini class to an almost standing-room crowd on butterflies in winter.

Just the title draws sympathy. Those born too late for the migration must shelter in crevasses and fallen leaves. With few flowers to nectar on, they eat rotting fruit (the persimmons in the Keeney's yard), sap from trees, cow patties and other such delicacies.

Of course, there were pictures. The queen's most loyal assistant, Frank Keeney, carried an iPad as gently as a

glass slipper to each eager attendant for viewing photos of wintering butterflies. In addition to the usual volunteers, several Master Naturalist students came to make up for missed trainings. We know they have a choice of make-up classes, so we're glad they chose the wildscape. We hope to see them again soon.

Marylee Thomason begged for more respect for spiders in her January Mini Class titled "Take a New Spin on Spiders." Just remember the two benefits spiders have for humans, and you may forget your arachnophobia long enough for them to skitter away.



Frank and Josephine Keeney prepping for the mini class.

1. They eat the weight of the entire human population of the world every day in insects. That includes bedbugs, ticks, mosquitoes, fleas that can cause disease and the wide variety of insects that consume our food crops.
2. They do it every day without pesticide residue, and they do it for free.

The president's staff is working on an order that will be out any day protecting spiders. It is expected to read something like: "You don't have to like 'em. Just don't kill 'em!"

Creating Light in Darkness Don Young

Reprinted with permission from Prairie Notes #122 Feb 1, 2017.

Has there ever been a darker time for the natural world? Not in my lifetime do I recall so many forces lined up against Mother Nature and planet Earth. From misinformed climate skeptics to an out of touch State House to the, fill in the blank _____ White House, these and other forces and their unsustain-

Thanks to our last speaker

A big crowd turned out in February for Luke Metzger, Founding Director of Environment Texas. Luke has spoken to us a number of times over the years, and at this meeting his topic was Texas' Environment in the Trump Era.

We also received a timely update on the current state legislative session and Luke encouraged us to join [Alliance for a Clean Texas](#) in order to stay informed about the progress of environmental legislation during this session.



ACC President Jan Miller with Luke Metzger.

able, irresponsible policies have converged to attack or threaten all I hold dear.

"Keeping it like it was" is not on their agenda and YOU, dear reader, are the enemy.

Back in the day, one had to burn billboards, chain oneself to a tree or march against Monsanto to get labeled an environmental

radical. It's too easy these days. If you love the natural world, believe in science, embrace clean energy, water and air, or question the political/industrial status quo, you are now an environmental radical. Times are dark, indeed, but there is light where we make it.

The rabble-rousing origins of Friends of Tandy Hills and its predecessors helped defend and save this glorious prairie remnant from the dumpers, dirt-bikers and frackers. We accepted the challenges of that dark era despite big odds. We persevered. Our biggest enemy now seems to be privet, but climate change concerns are the bigger-picture problem that may test the resiliency of our prairie hills and our management skills unlike ever before.

So, what to do about the current situation occurring on a much bigger and darker scale? You can march in protest, give money to groups fighting the good fight, call your legislators, raise your kids to be monkey-wrenchers, . . . the usual stuff.



Photo by Greg Hughes.

When you love something, you learn to appreciate it — which leads to a desire to protect and defend it from harm whatever it takes. When you have that and a bit of luck, inspiration and guidance often follow. The words of poet, **Mary Oliver**, still work for me:

"Pay attention. Be astonished. Tell about it."

Note: The following was not part of Don's essay, but it seems only fair to promote the remarkable work being done at Tandy Hills. Please consider joining.

Friends of Tandy Hills depends on your support to help improve YOUR park. Please renew your membership today. Your support helps fund outdoor education, conservation and restoration programs being done by Friends of Tandy Hills Natural Area and our events such as Prairie Fest, BioBlitz, Brush Bash, Wild Food Walks, Trout Lily Walks, Kids on the Prairie, Wildflower Walks and PrairieSky / StarParty. Become a Friend HERE: <http://www.tandyhills.org/donate>

Don't we wish that the Interurban was still around? O.K. Carter

Reprinted with permission from Geraldine Mills, Fielder House Museum.

Though much has been made of the fact that Arlington is the most populous city in the country without mass transportation, it wasn't always that way! For more than three decades, basically from 1902 to 1934, the Texas Traction Company (better known as the Interurban) provided fast, reliable service with an electric trolley connecting Dallas and Fort Worth through Arlington, showing up, on average, about every 30 minutes. Better yet, the system also connected Fort Worth to Cleburne, and connections were available from Denison/Sherman through Dallas all the way to Waco. And yes, other parts of the state also had electric trolley systems. They were fast, capable of speeds of 60 to 70 miles per hour, comfortable and energy efficient. Keep in mind that in 1902 a trip from Fort Worth to Dallas via carriage or horse took a day or longer, or a half day to and from Arlington from either of those cities. The Interurban trip from downtown Big D to Cowtown was an hour,



including stops. An Arlington to Fort Worth or Dallas Interurban run typically took about 30 minutes – a vast savings in time. The round-trip cost? About 50 cents, cheaper if you bought a book of fares.

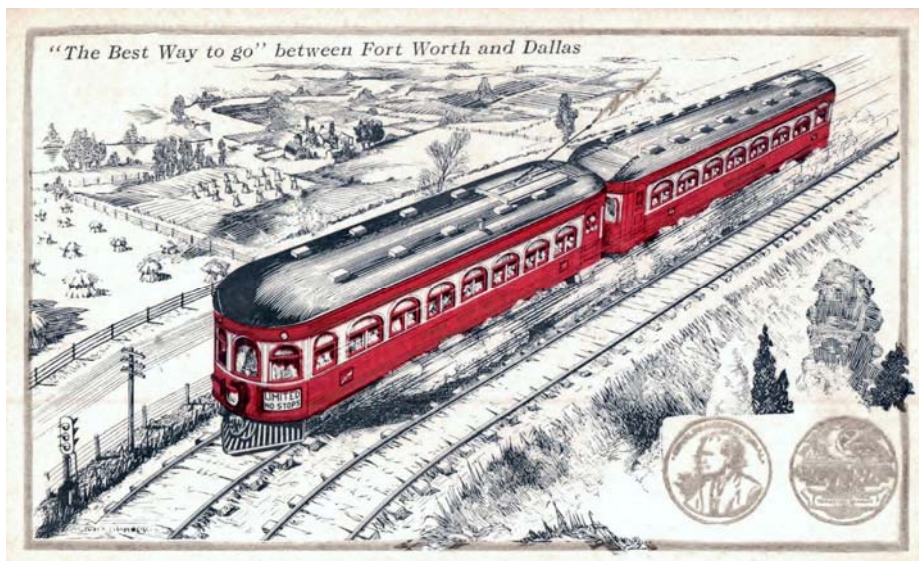
In Arlington the route ran straight down Abram Street and there was even a depot at Abram and Center Streets where the Levitt Pavilion is now located. Coaches moved via electric motors, which were powered by overhead cables carrying

650 volts of direct current. The main power station was at Handley, which was also the site for an Interurban excursion to a popular pavilion located at “Lake Erie” in Handley – now Lake Arlington.

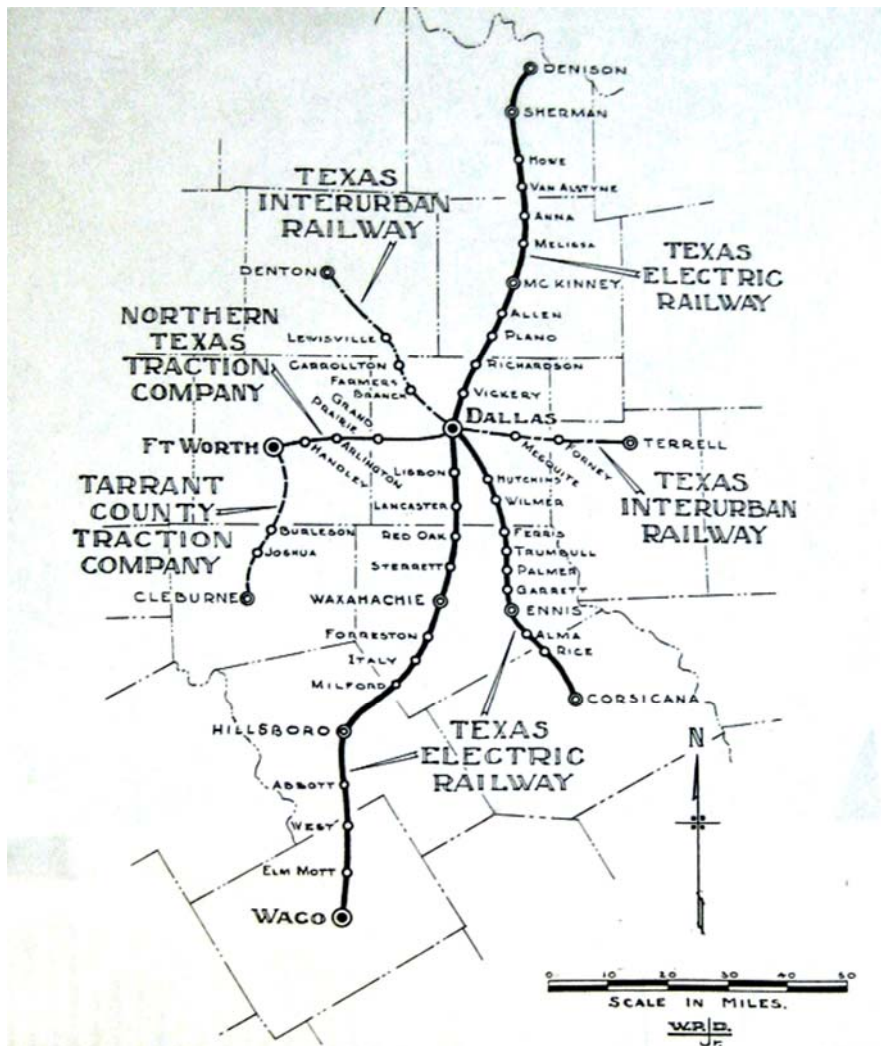
The Interurban reached its zenith in 1920, when it had four million riders and the company enjoyed a profit of a then-handsome 1.5 million.

What happened to the Interurban? Part of the institution's demise was the growing popularity of the auto. But part of it was also General Motors, which campaigned hard to sell motorized bus routes as snazzier, more flexible and simply better. Buses were also sold at discounts. Unable to compete, the Interurban Dallas to Fort Worth route shut down in 1934. The rails were eventually scrapped for World War II demands.

Today, little is left to remind us of those glorious electric trolley days.



Interurban Images



**Read---Relax---Smoke
Ride the INTERURBAN**

And Enjoy Your Trips Between
Dallas—Waco—Corsicana—Sherman—Denison
And Intermediate Points

2c A MILE

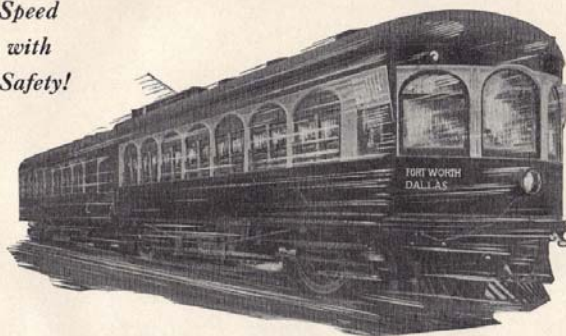
10% REDUCTION ON ROUND TRIPS



Half Fare For
Children

Ask the Agent

*Speed
with
Safety!*



Ride the
**Crimson
Limited**
Deluxe
INTERURBANS

between
Ft. Worth and Dallas
Limiteds leave Fort
Worth and Dallas ev-
ery hour on the half-
hour from 7:30 a. m.
until 8:30 p. m.

Locals leave every hour on the even hour from 6 a. m. until 12 p. m.

Local interurbans to Cleburne leave Fort Worth every hour on the hour
from 6 a. m. to 10 p. m.

Catch Interurbans Anywhere on Main Street

NORTHERN TEXAS TRACTION COMPANY

Tree Help Needed on Saturday, March 11 Jeremy Priest



VOLUNTEERS WANTED

Work Day at Randol Mill Park Tree Farm

8 AM to 2 PM Saturday, March 11 | 1301 W. Randol Mill Rd.

Help The Forestry and Beautification report seedlings, trim nursery trees and transplant seedlings into the tree farm located in the back of Randol Mill Park at this come-and-go volunteer work day. No sign up necessary, but participants will have to sign a waiver before helping out. Tools and supplies will be provided, but participants can bring their own cleaned pruning loppers. [Click here](#) for information on proper pruning techniques.

The tree farm is used to provide trees to the public for [LEAF](#) and [EcoFast](#) events. For more information, contact Jeremy Priest at 817-575-8310.

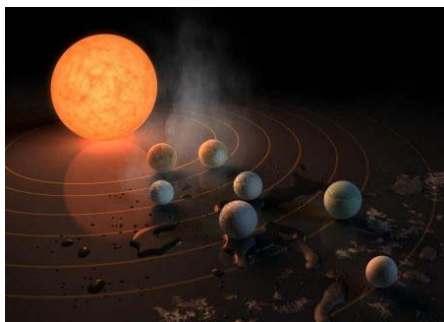


The Tree Farm is located in the Northwest corner of the park.

Follow directions from entrance to the correct area.



In Case You Missed It Grace Darling



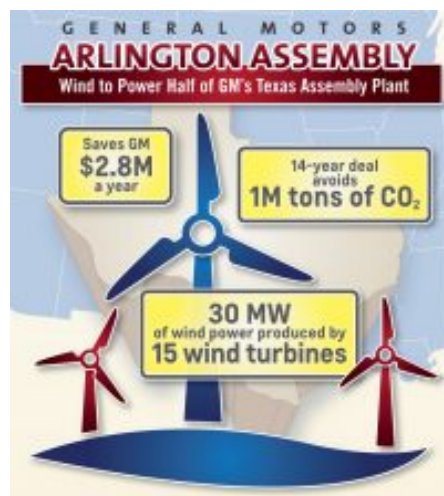
Seven Planets New for Us

Exciting news from *Nature*: In February, NASA scientists reported the discovery of seven planets in a distant solar system named Trappist-1. All seven planets are of similar shape and size to Earth, and three are the right distance from their local sun to have liquid water — that is, there is a strong possibility they may host organic life. At about 40 light-years (235 trillion miles) from Earth, the system of planets is relatively close to us, in the constellation Aquarius. Because they are located outside our solar system, these planets are scientifically known as exoplanets. One astrophysicist cautions that their sun, Trappist-1a, emits a type of radiation that tends to evaporate atmospheres, hindering the chance of life. But even if this solar system doesn't pan out, "finding a second Earth is not a matter of if, but a matter of when," says a NASA administrator. Learn more [here](#).

Wind Energy for GM Plants

This from UTA's *The Shorthorn*: In keeping with its goal to reach 100% renewable energy to power all its facilities (350 operations in 59 countries) by 2050, General Motors has purchased a one-third (50 megawatts) interest in the Cactus Flats wind farm in Concho County, Texas, enough to power the company's business offices in Fort Worth and Austin as well as the assembly plant in Arlington and 13 warehouses across the West. With the purchase of 193,000 MWh of wind elec-

tricity annually, GM expects to save about \$3 million in energy costs and to cut emissions by 1 million metric tons each year. GM also hosts 24 solar installations around the world and is the top-ranked automotive user of solar energy in the U.S.



Lead Ammo Rules, Again

As reported by *The Huffington Post*: Interior Secretary Ryan Zinke signed an order Thursday overturning a ban on using lead ammunition on wildlife refuges. Zinke signed the order on his first day in office, overturning a policy implemented by former Fish and Wildlife Service (FWS) Director Dan Ashe to prohibit the use of lead ammunition and fishing tackle on all FWS wildlife refuges that allow hunting or fishing. The policy was meant to help prevent plants and animals from being poisoned by lead left on the ground or in the water.



Environmentalists insist the ban was merely targeting lead in the environment, not the right to bear arms nor hunters' freedom to kill wildlife. "Overturning the lead ammunition ban may win political points with a few special interests, but it could cost the lives of millions of birds and the health of families that rely on game to feed their families," said a Sierra Club spokesman.

Transparency No Longer Needed

And from *epa.gov*: The U.S. Environmental Protection Agency (EPA) is withdrawing its request that owners and operators in the oil and natural gas industry provide information on equipment and emissions at existing oil and gas operations. The withdrawal is effective immediately, meaning owners and operators — including those who have received an extension to their due dates for providing the information — are no longer required to respond. "Today's action will reduce burdens on businesses while we take a closer look at the need for additional information from this industry," said EPA Administrator Scott Pruitt.



In a related story, the Keystone XL pipeline will not have to comply with President Trump's executive order prioritizing the use of American steel in pipeline projects, the White House said Friday. The order applies only to new pipelines, not those already under construction, is the explanation given.

Southwest Nature Preserve and OS Gray Natural Area Jan Miller

Friends of SWNP Monthly Meeting

Tuesday, March 21, 7:00 pm

West Arlington Police Service Center, Community Room

2060 W Green Oaks Blvd, Arlington, TX 76013

Parking is available in front of the building, via Ron McAndrew Drive.

Bats of North Texas

by Rachel Richter

Did you know that there are over 1300 species of bats? These flying mammals provide important benefits to natural ecosystems and human economies. This presentation will discuss bat biology, which bat species call DFW home, why bats are so important, and the current threats to bat populations.

Rachel is an Urban Wildlife Biologist for Texas Parks and Wildlife in the DFW area where she focuses on making our communities more wildlife-friendly through educational outreach and providing technical guidance.



Results are in: Our 10th anniversary Great Backyard Bird Count Compiler Jim Frisinger informs us that the tally is the most diverse ever — 45 species (besting 2014's 41 species) and 260 birds (also a record, besting the 241 counted in 2014). Three species not previously appearing in the February bird count were broad-wing hawk, hairy woodpecker and roadrunners. (**This just in:** Jim tells us that the eBird people are challenging the Hairy and the Broad-wing. More as this story develops.) Record counts were recorded for gadwalls, grebes, white-winged doves, blue jays, Carolina chickadees, red-bellied woodpeckers, mockingbirds, starlings, cedar waxwings and Northern cardinals.

For more information about Southwest Nature Preserve,

see www.swnp.org

or e-mail info@swnp.org.

continued on page 11

Southwest Nature Preserve & OS Gray continued from page 10**Texas Parks & Wildlife Department's City Nature Challenge
OS Gray NA 9 am-noon and SWNP 1-4 pm
Saturday, April 15**

Sam Kieschnick, DFW Urban Biologist, TPWD, is organizing a regional urban nature challenge for DFW as part of a state and national challenge, and two Arlington Parks & Rec sites, OS Gray Natural Area and Southwest Nature Preserve, are part of the challenge. Here's some background that Sam provided:

Last year, Los Angeles and San Francisco participated in a city-wide competition to see who could get the most citizen scientists to make the most observations of the most species. The tool that they used was iNaturalist (online network for citizen scientists with an associated app for smart phones), and LOTS of folks were engaged (1000 people made 20,000 observations of nearly 2000 species). After the event, citizen scientists retained the tool and still make lots of observations — and are actively engaged in the outdoors. This is a big deal.

The folks at California Academy of Sciences and Natural History Museum of Los Angeles County, the institutions that led this effort, have decided to extend the competition to any interested cities and urban areas in the US. Austin, Houston, Chicago, D.C., Miami, Minneapolis, Los Angeles, and some others are already on board. Dallas/Fort Worth will also be competing.



Leaderboard and to participate:

www.tpwd.texas.gov/naturechallenge

For questions and concerns, contact Sam Kieschnick
Sam.Kieschnick@tpwd.texas.gov

Saturday, April 15**BioBlitzes at Arlington
Parks****O.S. Gray:
9 am - noon****Southwest Nature
Preserve:
1 pm – 4 pm**

Free program!
Bring a
camera or
smart phone and
your curiosity!

continued on page 12

SW Nature Preserve & OS Gray continued from page 11

City Nature Challenge: Austin vs. Houston vs. DFW

Download the iNaturalist app • Observe • Take photos • Save • Upload • Share

Which city has the most species? Any observations of plants & animals you find in the participating counties between April 14th-18th will count for the challenge!

To find out what has been seen nearby:

1. Tap 'Explore' to find nearby observations
2. Tap grid to see observation photos

How to record observations:

1. Tap the camera icon (iPhone) or + icon (Android) to add an observation; tap camera icon to add more photos
2. Enter name of plant or animal, tap search to find a match
3. Tap save, repeat
4. Tap 'Upload' or 'Sync' (in the green bar) to share your finds

For leaderboard and details:

www.tpwd.texas.gov/naturechallenge

City Nature Challenge: Austin vs. Houston vs. DFW

April 14th-18th..... Which city will win?

Any observations of plants & animals you find in the greater metro areas of Houston, Austin, and Dallas/Fort Worth will count for the challenge! Plus, we will be competing against Los Angeles, San Francisco, and other cities from across the nation. Let's teach them not to mess with Texas Naturalists!

Dallas/Fort Worth Counties: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant, and Wise

Greater Austin Area Counties: Bastrop, Blanco, Burnet, Caldwell, Hays, Travis, and Williamson

Greater Houston Area Counties: Austin, Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller

For leaderboard and details:

www.tpwd.texas.gov/naturechallenge

Four-legged Fire Ants Grace Darling

The following report is compiled primarily from several articles by Shannon Tompkins and others published in the Houston Chronicle between 2013 and February 25, 2017. Additional sources are cited below.

"Described by some wildlife managers as 'four-legged fire ants,' Texas' population of economically and environmentally destructive feral hogs has exploded to an estimated 2.6 million and continues expanding despite hunters annually taking 750,000 of the swine," cried a *Houston Chronicle* piece in 2013. More than two decades into Texas' ever-escalating war against feral hogs, the wild swine continue gaining ground — now spreading across at least 240 of Texas' 254 counties — while the state's native wildlife, plants, and ecosystems suffer.

"The first year this agency began removing feral hogs was 1982. They took 86 pigs that year," said [Michael Bodenchuk](#), state director of the Texas offices of Wildlife Services, the U.S. Department of Agriculture branch designated to address human / wildlife conflicts. "In 2011, we removed 24,746. Between 2006 and 2010, Texas' feral hog population grew about 21% a year," Bodenchuk said. And that's with Texans taking an estimated 29% of the pig population each year.

Texas law designates the non-native feral hogs as unprotected, non-game animals and imposes almost no restrictions on when, how, or how many of the hogs can be taken. They can be hunted and killed year-round, day or night, in any number. Recreational hunters take an estimated 600,000 feral hogs a year, finding the



wild swine a challenging hunting quarry and wonderful on the table. Commercial trappers using live-catch pens annually take and sell to wild game processors another 70,000 or so of the pigs. Another 50,000 or more are killed by [Texas Wildlife Services](#) and private firms hired by landowners to knock back pig populations damaging crops or property.

Even against this onslaught, wild hogs are more than holding their own. "There has been some success with reducing feral hog populations in fairly small areas," said [Donnie Frels](#), manager of the [Texas Parks and Wildlife Department's](#) Kerr Wildlife Management Area, a premier wildlife research site that is studying feral hogs. "But so far, we haven't come up with any control mechanism that works for a long period of time over a large area."

Perfect Consumers, Super Competitors

Feral hogs are perfectly equipped to survive and thrive, even under

intense persecution. The progeny of domestic hogs that quickly turned feral or hybrids between domestic feral pigs and European wild hogs, feral hogs are omnivores with a non-discriminatory palate. Mostly traveling in social groups — sounders — holding 10-40 or more adults and their young, feral hogs use their long snouts, tusks, and strong necks to root for food that they consume almost nonstop. They will eat almost anything — tubers, acorns, insects, agricultural crops, and all manner of plants, even young trees — and are opportunist predators on reptiles, amphibians, ground-nesting birds and small mammals. Feral hogs prey on turkey and quail nests and, in some areas, are major predators on turtle nests.

Their prodigious reproductive capability is another key to their success. Sows begin reproducing at 8 months and produce 3 litters every 2 years, with an average litter of almost 6 pig-

continued on page 14

Four-legged Fire Ants *continued from page 13*

lets. The National Rifle Association calls feral hogs "the world's worst invasive species" on the basis of their ability to rapidly procreate, illegal movement by sports hunters, and escapes from domestic farms. The average lifespan of a pig is between 4 and 8 years. So, if a sow lives to be 6 years old, she's able to produce between 38 and 45 piglets in her life. Now let's say she had 40 piglets and half of those were females—20. Those 20 piglets could potentially produce 820 more piglets within 6-year lifespans. Another example of their breeding efficiency: If 70% of pigs in a region are killed, that population can return to their full strength within 2-3 years.

Feral swine can now be found in 39 states and two Canadian provinces — and experts estimate their numbers to be well over 5 million. California, Florida, Oklahoma, and Texas have the largest populations. In Texas, where there's a population of more than 2.6 million feral hogs, the reported costs of swine-borne damages and control for the state is \$500 million a year; nationwide, the cost is estimated at \$1.5 billion.

Destruction on the Hoof

Wild pigs do their damage both directly and indirectly. Feral hogs compete directly with white-tailed deer for forage, especially acorns and

other mast. They also hog the tens of thousands of corn- and protein-dispensing feeders placed by hunters as supplemental feed for deer; feeders frequented by feral hogs are avoided by deer and other native wildlife.

Feral hogs also can greatly lessen the availability of vegetation crucial to deer, quail, turkey and other native wildlife. Where hogs congregate, plant diversity is reduced, with fewer forbs, fewer large-seed (mast producing) trees, and loss of leaf-litter ground cover — which in turn results in fewer invertebrates and small vertebrates and changes in soil chemistry that alter plant communities. Plots disturbed by feral hogs grow twice as many Chinese tallow trees as hog-free areas. Tallow trees are one of the most problematic non-native, invasive plants threatening Texas, as the tallows grow in dense monocultures, shade out native trees and grasses, are of almost no value to wildlife, and are almost impossible to control.

Because they lack sweat glands, pigs must wallow in mud and water to maintain a healthy body temperature and tend to roam around rivers and creeks, causing erosion along stream banks and shorelines. The feral hogs' rooting behavior causes severe damage to environmentally sensitive and hugely important areas along waterways, particularly in central, southern and western Texas where such waterways are limited. Sounders spend much of the day around wallows, especially in hot weather, and leave significant amounts of urine and feces in and around the water. The disastrous effects on water quality extend beyond the immediate wallow when silt, excrement, and potentially harm-



ful pathogens are washed downstream. Through contact with the pigs' bodily fluids, handling or ingestion of infected tissues, people are at risk of contracting leptospirosis, brucellosis, E. coli, salmonellosis, toxoplasmosis, rabies, and more.

Proposed Control Methods Guns

For years the NRA has lobbied lawmakers to draft legislation allowing hunters and landowners to use semi-automatic firearms "to mitigate further damage from . . . the feral hog epidemic." So far, Congress has declined. But in 2011, then-Texas House member Sid Miller introduced a bill to allow wild hog (and coyote) hunting with automatic weapons from helicopters provided the landowner or agent gave permission. After the bill's passage a mini-industry was born, with companies such as Last Shadow, HeliBacon, Pork Choppers, and Heli Gunner offering helicopter hog hunts starting at \$775 (2016 price). Still, a spokesman for Texas Parks and Wildlife explained that "hogs shot from the air account for a fairly small percentage of the estimated 750,000-plus feral hogs annually harvested statewide" and the wild pig population continues to climb.



continued on page 15

Four-legged Fire Ants continued from page 14

Warfarin

But Miller has never stopped searching for better ways to kill some 2+ million feral hogs in Texas, and in February the now-agriculture commissioner announced "the 'Hog Apocalypse' may finally be on the horizon," according to the Washington Post. Miller said he would return his entire research budget to the state. He doesn't need it anymore, he says, after finding "a new weapon in the long-standing war on the destructive feral hog population." It's called warfarin.

Marketed as Kaput Feral Hog Bait, the product is comparable to rat poison, with similar effects. "They bleed," a former USDA researcher said. Internally and externally, usually for a week or more before they die.

Just as concerning, he said, were difficulties in preventing other species from eating the poison — which is known to paralyze chickens, make rats vomit, and kill all manner of animals. Pigs that eat warfarin-laced bait bleed to death. Slowly — it takes 4 to 7 days for a pig to die after ingesting a lethal dose, which often requires many feedings. Bleeding from the nose, mouth, ears . . . a gruesome death. Despite its apparent effectiveness — a 1987 limited trial from Australia found 98% mortality — warfarin was ultimately labeled inhumane and banned by the Australian government for its unacceptably high risk to scavengers and secondary consumers. But the Environmental Protection Agency just approved it.

In the wake of Miller's announcement, the Texas Hog Hunters Association initiated an online petition to have the rule revoked.* The group cites concerns

about the potential human health effects of eating feral hogs that have ingested the warfarin-infused baits as well as questions about collateral damage to non-target species, such as deer or domestic dogs that ingest treated baits, and the possible secondary poisoning of other mammals and protected birds, such as hawks and eagles. No need to worry, say Kaput's Colorado manufacturer and the Texas Department of Agriculture: the risk to non-target species that might ingest the warfarin-spiked bait is low.



Sodium nitrite

For the past 3 years, research at the Kerr Wildlife Management Area has focused on sodium nitrite, a toxicant that has been used to great effect against feral hogs in Australia. Sodium nitrite kills by disrupting the blood's ability to carry oxygen to the brain. Pigs are highly susceptible to sodium nitrite because, unlike humans and other mammals, they lack the ability to produce an enzyme that reverses the effects. Fortunately, pigs dead by ingestion of sodium nitrite pose little or no threat to scavengers or predators. The goals at Kerr WMA are to develop bait-sodium nitrite mixtures that feral hogs will eat in sufficient quantities to constitute a lethal dose, and to design a delivery system — a feeder — that feral hogs can access but that can't be used by deer, raccoons, and other non-target wildlife species.

Rob Denkhous, manager of Fort Worth Nature Center and Refuge and noted feral hog foe, offered this comment: "I'm very disappointed in the short-sightedness of the decision to approve a warfarin-based toxicant for use in the effort to control Texas' burgeoning wild pig population. Warfarin has been shown to be ineffective for pig control in Australia, and the extreme likelihood of secondary poisoning in the state's scavenger populations that feed upon wild pig carcasses will result in public outrage as well as environmental degradation. Current research shows that Texas Parks and Wildlife is at the forefront of developing an approved toxicant for wild pigs, with studies being conducted on the use of sodium nitrite at the Kerr Wildlife Management Area. Sodium nitrite, tests show, provides a much safer, more humane control solution than warfarin but is mired in the approval process. The \$900K budgeted for wild pig control that AgriLife will now shift to other projects could have been used to further sodium nitrite research and push the approval process, for a much better toxicological solution to the state's wild pig problem."

* Breaking news: MAR 3, 2017, THHA — Texas Hog Hunters Association and Wild Boar Meat Company successfully had an injunction placed against Sid Miller that invalidates his emergency rule for the use of a warfarin-based poison to be used against feral hogs. This injunction gives us all until March 30, so we still need to be diligent in our efforts and continue to press Austin and our representatives.

<https://wildboar meats.com/warfarin/>

Habitat Loss or Just a Little Cleanup? John Darling



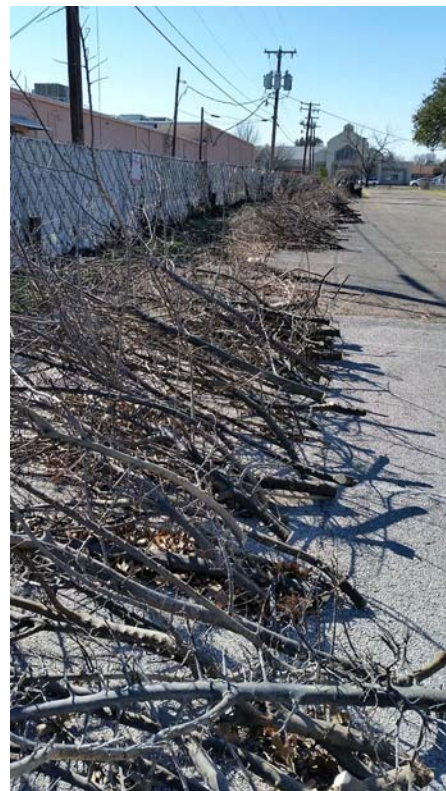
Every workday for over 10 years I've parked up against a strip of scruffy vegetation near Arlington High while picking up coffee grounds for my job. That strip, about 4 x 500 feet, was a just bit of chaotic vegetation that I mostly ignored until recently.

In the winters, though, it was easy to notice the cardinals, chickadees, yellow-rumped warblers, and dark-eyed juncos that somehow managed to find food and maybe a little shelter there. Mockingbirds, cardinals and Carolina wrens sang there every spring, alongside grackles, house sparrows and starlings, of course.

But a couple of weeks ago I pulled in and saw that a crew had just cut down every single thing.

Not exactly pristine post oak woodland, but that mess harbored some birds and who knows how many invertebrates. One big question is, what happened to those winter, summer, and permanent resident birds after their habitat vanished?

I'm thinking about carrying capacity, the idea that an environment can support a certain number of a given species indefinitely. I recall that habitats are often like motels with No Vacancy signs lit up. If a place is okay for 20 wintering warblers, it won't support 30 or 40. People who clear brush and cut down trees will claim that animals, especially birds, will just "go someplace else." I don't think so; there's probably no vacancy elsewhere. If that strip kept 20 juncos alive all winter, there's a chance they're dead now. And there might be 20 fewer from now on.



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