HARVEY'S RECKONING TPWD steps up after hurricane wreaks havoc LAND AND CATTLE How Dixon Water won top land stewardship award **RUTTING BUCKS** Experience the rut through Wyman Meinzer's photos

t e x a st parks g public to the state of th





DEAL WITH THE DEVILS THE CHALLENGES OF PADDLING AND PROTECTING A WILD RIVER





Texas Parks and Wildlife partners with more than 1,200 schools to offer the National Archery in the Schools Program, where students have the opportunity to master archery skills and compete for awards and scholarships at state, national and world tournaments. Learn more about this popular in-school program at **www.tpwd.texas.gov/NASP**.

ROAM FREE.

The Texas-built Tundra is the truck you need to conquer the most rugged terrain Texas has to offer. So go farther and do more, because there are new adventures waiting for you just outside your front door. That's why we proudly support Texas Parks and Wildlife — and our combined mission to help students learn skills to better enjoy the great outdoors. So get outside, and explore the parts of Texas you've yet to see. **Toyota.com**











Official Vehicle of the Texas Parks & Wildlife Foundation

NOVEMBER 2017

Healing Land with Livestock

ON THE COVER: Water spills over limestone rocks at Dolan Falls on the Devils River in West Texas. Photo © Sean Fitzgerald Dixon Water Foundation wins land stewardship award for holistic management.

by Eva Frederick

22 Harvey's Reckoning

Game wardens, park staff and biologists step up after hurricane wreaks havoc. **by Louie Bond**



The challenges of paddling and protecting a wild river. **by Pam LeBlanc**

30 Whitetail
30 Rut in
Texas

A PHOTO ESSAY by Wyman Meinzer

järks wildlife

NOVEMBER 2017 • VOL. 75, NO.5

GOVERNOR OF TEXAS Greg Abbott

COMMISSION

T. Dan Friedkin, Chairman Houston Ralph H. Duggins, Vice Chairman Fort Worth Lee M. Bass, Chairman-Emeritus Fort Worth Anna B. Galo Laredo | Bill Jones Austin Jeanne W. Latimer San Antonio James H. Lee Houston | S. Reed Morian Houston Dick Scott Wimberley | Kelcy L Warren Dallas

Executive Director Carter P. Smith Communications Director Josh M. Havens

MAGAZINE STAFF

Publisher Randy Brudnicki Editor Louie Bond Managing Editor Russell Roe Art Director Nathan Adams Photo Editor Sonja Sommerfeld Chief Photographer Earl Nottingham Photographer Chase Fountain Business Manager Traci Anderson Editorial Assistant Emily Moskal Editorial Intern Eva Frederick Photography Intern Catherine Groth Contributing Writers Steve Lightfoot, Stephanie M. Salinas Garcia, Aubry Buzek, Dyanne Fry Cortez

EDITORIAL OFFICES

4200 Smith School Road, Austin, Texas 78744 Phone: (512) 389-TPWD | Fax: (512) 389-8397 Email: magazine@tpwd.texos.gov

ADVERTISING SALES OFFICES

StoneWallace Communications, Inc. c/o TP&W magazine 4200 Smith School Road, Austin, Texas 78744 Advertising Director Jim Stone (512) 799-1045 Email: Jim.stone@tpwd.texas.gov

Texas Parks & Wildlife magazine (ISSN 0040-4586) is published monthly with combined issues in January/February and August/ September by Texas Parks and Wildlife Department, 4200 Smith School Road, Austin, Texas 78744. The inclusion of advertising is considered a service to subscribers and is not an endorsement of products or concurrence with advertising claims. Copyright © 2017 by Texas Parks and Wildlife Department. No part of the contents of this magazine may be reproduced by any means without the permission of Texas Parks & Wildlife magazine.

Subscription rate: \$18/year; foreign subscription rate: \$2795/ year. Postmaster: If undeliverable, please send notices by form 3579 to *Texas Parks & Wildlife* magazine, P.O. Box 421103, Palm Coast, FL 32142-1103. Periodicals postage paid at Austin, Texas, with additional mailing offices. Subscriber: If the Postal Service alerts us that your magazine is undeliverable, we have no further obligation unless we receive a corrected address within one year.

CUSTOMER SERVICE Call (800) 937-9393





TPWD receives funds from the U.S. Fish and Wildlife Service. TPWD prohibits discrimination on the basis of race, color, religion, national origin, disability, age, and gender, pursuant to state and

federal law. To request an accommodation or obtain information in an alternative format, please contact TPWD on a Text Telephone (TDD) at (512) 389-8915 or by Relay Texas at 7-1-1 or (800) 735-2989. If you believe you have been discriminated against by TPWD, please contact TPWD or the U.S. Fish and Wildlife Service, Office for Diversity and Workforce Management, 5275 Leesburg Pike, Falls Church, VA 22041.

FROM THE EDITOR

AS WE PAUSE TO GIVE THANKS later this month, we'll certainly have plenty to reflect upon. Natural disasters have ravaged large swaths of our nation, leaving our brothers and sisters vulnerable and struggling to regain the most basic of human needs. I expect I'll feel a pang of conscience as I bow my head, knowing that so many others aren't sitting at their own table enjoying a feast this Thanksgiving.

If you're watching it all on a screen, these horrifying events can become a numbing litany of statistics — numbers of rescues, numbers of destroyed properties, numbers of displaced persons, numbers of dollars to make it all good again. Life is so much more than numbers, isn't it?

Since our long deadlines preclude breaking news, *Texas Parks & Wildlife* magazine has to take a different approach to covering natural disasters. Our Hurricane Harvey aftermath feature this month focuses more on the personal side of our agency's efforts, though we do include a few statistics to offer an overview of the results.

With time, we're able to see the silver lining in the destruction: the selflessness of individuals who rise up to become heroes and the amazing work that can be accomplished when people work together.

Ironically, we'd started thinking about this very topic in 2016, as we began to plan for the magazine's 75th anniversary this year. "Who starts a magazine during a world war?" has reverberated in my head for months now. "Everyday heroes" is the answer to that question. People who rise above and inspire when times are darkest are the kind of folks who started this magazine 75 years ago next month.

To celebrate their courage and passion for this mission, we took the team down to the Rio Grande Valley in September for the most wonderful (yet craziest) week of magazine work we could have possibly cooked up for this momentous event. Our December issue will be a love letter to the Valley, a place of warmth and humor, culture and color, and a bounty of nature beyond compare. We've thrown out our usual format for just one month, and we hope that you'll grab an agua fresca and some pan dulce and enjoy a break at the tip of Texas with us.

I'm getting ahead of myself, though, because the issue in your hands offers the beauty and brutality of the seasonal deer rut as photographed by the legendary Wyman Meinzer and our first-ever collaboration with another legend of the outdoors, Pamela LeBlanc, as she paddles down the wildly glorious Devils River.

Just as our founders so wisely determined 75 years ago, what folks need most when times are darkest is a reason to hope, a reminder of what still remains and a respite from worry, even if just for a moment. We hope that *Texas Parks & Wildlife* magazine continues to uphold those ideals for many years to come.

Louie bond

Louie Bond, Editor



5 From the Editor

- 8 At Issue Hurricane Harvey's Heavy Toll
- Mail Call 10
- 11 News Lake Livingston Restoration
- Park Pick 12 Palo Pinto Mountains
- Wild Thing 14 Prehistoric Paddlefish
- 16 Flora Fact Hill Country Fall Bloomer
- 18 **Picture This** The Drone Age
- 46 Legacy The Magazine in the 2010s
- 56 Get Out Day Hiking
- **Parting Shot** 58

↑ "I DON'T KNOW HOW MANY FOLKS CAME UP AND SAW THE [TPWD] LOGO AND ASKED WHAT THEY COULD DO. THEY WERE FROM ALL WALKS OF LIFE: SOME HAD BOATS IN THE BACK OF THEIR TRUCKS." — EARL NOTTINGHAM



TEXAS JUST GOT QUIETER.



TRANCUILO





www.LaRue.com



HURRICANE HARVEY'S HEAVY TOLL

THE VIEW COMING INTO THE ROCKPORT AREA right after Hurricane Harvey didn't leave much to the imagination. The vestiges of the storm's path and its collateral damage were slung and scattered with both abandon and abundance across every street, roadway, ditch, lot, yard, field and pasture. Heartbreaking doesn't do the scene justice.

Homes, businesses, schools, churches and other buildings were reduced to piles of great rubble. Electricity and telephone lines were blown down, power poles split in half. A large, multilevel boat storage area, replete with dozens of boats, looked as though it had been collapsed in a tortilla press. Other boats, previously moored and secured in their slips, were pushed atop one another or stranded in streets many yards away. Twisted tin and steel were everywhere, as were broken windows, collapsed roofs, and flooded cars and structures. Century-plus-old oak trees, sculpted from years of blowing winds, had been pushed down, split, de-limbed and topped-off from the 130 mph winds.

The scene wasn't much better up the coast, where the impacts of 30 to 50 inches of rain were evident in places like Dickinson, Houston and Port Arthur. Mounds of flooded and ruined household items were lined up in rows on street after street, awaiting transport to big haul-off yards. Miles and miles of roads and levees were compromised from the voluminous amounts of rain. Water systems were temporarily off-line, and power was days, or even weeks, away for many.

Suffice to say, Hurricane Harvey did a number on communities up and down the Texas coast from Port Aransas to Beaumont and beyond. Our thoughts and prayers continue to steadfastly remain with those families and places most impacted by and still recovering from this catastrophic storm.

Not surprisingly, the Texas Parks and Wildlife Department did not escape the storm unscathed. Nearly 100 of our colleagues either lost their homes altogether in the storm or have found them uninhabitable until, or if, they can be sufficiently cleaned, remediated and repaired. Thirty-plus state parks, fish hatcheries, wildlife management areas and offices were damaged, many substantially. A very preliminary estimate suggests that TPWD alone experienced between \$50 million to \$70 million in costs, damages and losses.

If there was a silver lining in the wake of the storm's devastation, it was the outpouring of support and help from family and friends, neighbors and even total strangers. People came from all over the state and beyond, loaded to the gills with rescue boats, food and water, batteries, generators, fans, chainsaws, clothes, gift cards and anything else they could think of to help those displaced and in need of a helping hand.

Speaking of helping hands, the state's first responders were present in droves to help with critical evacuations and life-saving efforts during the floods. The utter fortitude and dedication of these public servants to helping and saving people during their most vulnerable moments was nothing short of awe-inspiring.

I am deeply proud of the fact that the department's state game wardens and state park police officers, as well as staff from our Wildlife, Inland Fisheries, Coastal Fisheries and Infrastructure teams, were among them. All in all, nearly 500 game wardens and other TPWD personnel helped conduct more than 10,000 water-based rescues. Meanwhile, our state parks team opened up our state parks for free to over 8,000 evacuees displaced by Harvey.

Immediately after the storm, TPWD staff went about the difficult business of assessing facility damages, stabilizing compromised buildings, removing fallen trees, cleaning up wreckage, ripping out flooded sheetrock and securing contractors.

And, seemingly in no time, they were out again doing what they do best: surveying oyster reefs and fish populations in the bays, opening up the parks to the general public, getting wetland compartments ready for teal hunters, checking hunters in the dove fields, and making plans for dune, oyster, marsh and other habitat restoration projects.

I have often said that your Texas Parks and Wildlife Department shines the brightest when times are the darkest. While full recovery from the storm will undoubtedly take years, I am deeply grateful that our work to steward your lands, waters, fish, wildlife and parks never stopped.

Thanks for caring about our wild things and wild places. They need you now more than ever.

EXECUTIVE DIRECTOR

TEXAS PARKS AND WILDLIFE DEPARTMENT MISSION STATEMENT:

To manage and conserve the natural and cultural resources of Texas and to provide hunting, fishing and outdoor recreation opportunities for the use and enjoyment of present and future generations.



Whole Earth

Trade up to a larger screen.

STORE LOCATIONS Austin • Dallas • Houston San Antonio • Southlake WholeEarthProvision.com

MAIL CALL

DOG DAYS OF SUMMER

My wife, Lena, and I are fond of the heat we get in Texas. It gives us a reason to celebrate the dog days of summer with our four-legged friends — Dim Sum and Springroll — by taking them paddleboarding at Lake Lewisville in the city of Little Elm. During one of these outings, I took with me *Texas Parks & Wildlife* magazine to read.

While it was sweltering hot on land, the lake provided a welcome respite. What a great way to enjoy our lakes, creeks, rivers, streams and oceans with a great magazine!

We love the magazine. Keep up the great work!

Sophy Sam Plano

WRITE TO US

Send your letters to *Texas Parks & Wildlife* magazine 4200 Smith School Road Austin, TX 78744

We reserve the right to edit letters for length and clarity.

- 🜌 magazine@tpwd.texas.gov
- 🖪 facebook.com/tpwmagazine
- twitter.com/tpwmagazine

linstagram.com/tpwmagazine

www.tpwmagazine.com

WORTH PROTECTING

The July 2017 issue of *Texas Parks & Wildlife* magazine contains the following statement: "Consider that 99.99 percent of all species that have lived on Earth have gone extinct." As an environmental biologist for the past 45 years, I find that to be a pretty large number relative to the present number of extant species,

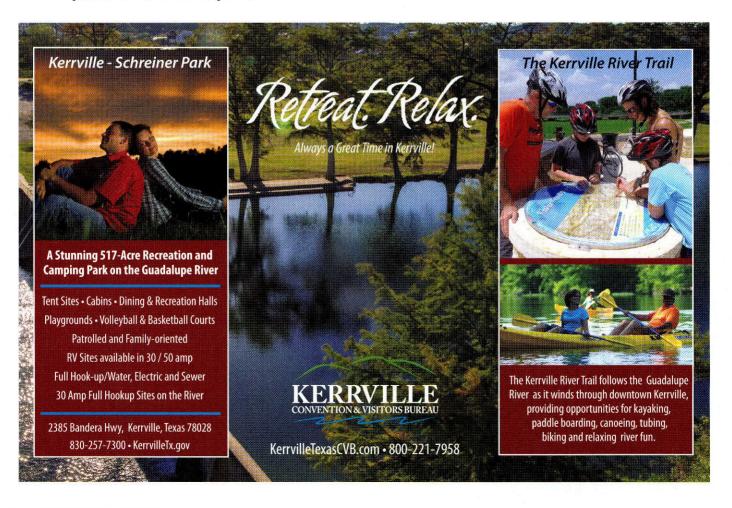
not to mention undescribed taxa. A concern I have with this type of reporting is that some readers may conclude that it's not worth protecting listed species because extinction or extirpation is a "natural process." Thanks for your consideration.

> **STEPHEN PORTER** Aquatic biologist, retired

MAGIC IN THE MAILBOX

When I arrived in Texas almost two years ago to be near my offspring as I get old(er), my backpacking daughter started a subscription to your magazine for me. I've renewed it; I smile every time I find it in the mailbox.

> PAUL VERIZZO Round Rock





Lake Livingston Restoration Celebrated

ON SEPT. 13, former first lady Laura Bush and senior officials of the Lake Livingston Friends of Reservoirs, the Trinity River Authority and the Texas Parks and Wildlife Department celebrated community-based efforts to foster aquatic habitat around Lake

RADIO

Passport to Texas is your guide to the great Texas outdoors. Any time you tune in, you'll remember why you love Texas.

Go to **www.passporttotexas.org** to find a station near you that airs the series.



Livingston, Texas' second-largest lake.

The event was held at Wolf Creek Park in Coldspring and included a demonstration of American waterwillow plantings in the lake by local high school students.

The Friends group created a community-based, multigenerational volunteer pool ranging from local high school students to retirees and including inmate horticulturists from the Texas Department of Criminal Justice Ellis Unit (Huntsville) who are developing improved methods to grow healthier plants in less time. They've planted more than 10,000 American water-willows at 18 sites, mostly in the southern portions of Lake Livingston.

Lake Livingston Friends of Reservoirs was designated a Conservation Wrangler by Texan by Nature, a program highlighting the very best Texan-led conservation projects occurring in Texas. Texan by Nature was founded in 2011 by Mrs. Bush to align the broad interests of conservation groups with business, health care, schools, the scientific community and faith-based organizations. For more information, visit texanbynature.org.



Enjoy the short and scenic Goliad Paddling Trail. **Watch the week of Nov. 12-18.**

Winner of 12 Emmy Awards, our television series is broadcast throughout Texas on local PBS affiliates. In stereo with closed captions. www.tpwd.texas.gov/tv

OCT. 29-NOV. 4:

Sounds of Sea Rim; Sea Center stocking; Dixon Water conservation; tree stand safety; mockingbirds.

NOV. 5–11:

Fort Richardson living history; El Paso's trail builder; lessons from Lavaca Bay; a campfire.

NOV. 12-18:

Goliad Paddling Trail; laser technology and rock art; Texas Clipper's final port of call.

NOV. 19-25:

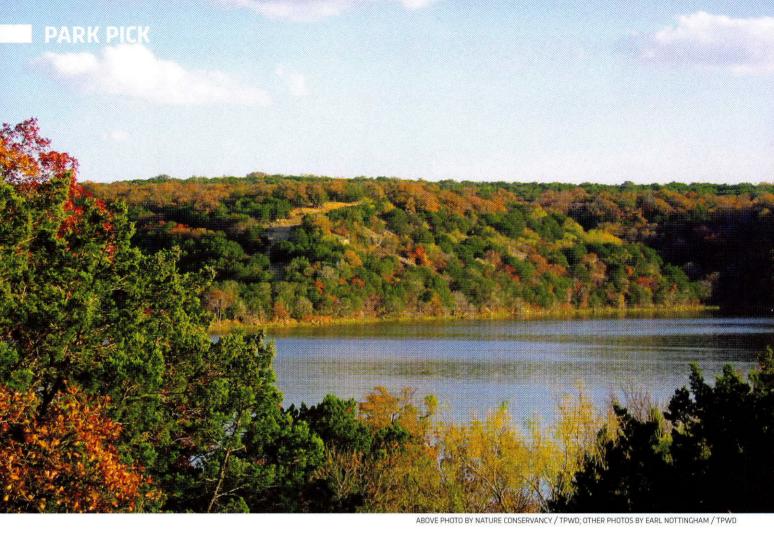
Texas Clipper creates an ocean oasis; warden of the county; Cedar Hill biking; stingrays.

NOV. 26-DEC. 2:

Creating fish structure; restoring McFaddin Beach; turkey return; keeping in contact; hummingbirds.







STARRY SKIES & CHICKEN-FRIEDS

A sneak peek at Palo Pinto Mountains State Park. BY JOHN FERGUSON





THIS MAY BE the greatest thing to happen to this part of the state. The Star Party was

amazing! We even saw the International Space Station. Look at the size of that chicken-fried steak! The potato has to come on a separate plate!

What do these disparate statements have in common? They all have to do with Palo Pinto Mountains State Park and the nearby gateway community of Strawn.

Located halfway between Fort Worth and Abilene, just off Interstate Highway 20, Palo Pinto Mountains State Park is still in the development phase, and not yet open to the public — at least not all of the park or all of the time.



Lake Tucker, a picturesque 90-acre lake near the center of the park, is already available for your fishing pleasure. The park also hosts special events like semiannual stargazing parties and equestrian trail rides in the spring and fall. (Check the park's Facebook page for updated information on nature hikes or to learn more about the First Day Hike on Jan. 1.)

With nearly 4,400 acres, the park holds a bounty of nature's beauty — 1,400-foot ridgelines, tree-covered hills and 4.5 miles of frontage along Palo Pinto Creek. When rain comes at the right time, Indian blanket, Indian paintbrush and gayfeather flowers blanket the hillsides and meadows; towering pecans and several species of oak trees dig their roots deep into the creek valleys.

The current public use plan for the park includes cabins, picnic areas and many miles of trails for horseback riding, hiking and biking. Most of the facilities will be clustered around Lake Tucker; the majority of the park will be left in its pristine, natural state. Located just 80 miles from Fort Worth, Palo Pinto Mountains State Park promises to become a favorite playground for residents of the DFW Metroplex.

Until funding is secured to design and develop the park, the acreage offers limited access. Planning is ongoing, though, and one day park visitors will be able to enjoy a variety of outdoor recreational opportunities.

When you visit, don't forget to stop by Mary's Café and fortify yourself for a hike with one of those fabulous chicken-fried steaks. Be sure to tell Mary that TPWD sent you. *

In keeping with this month's 2010s theme, our Park Pick features a park from the '10s: Palo Pinto Mountains, purchased in 2011.

Texas begins here!

Pack your binoculars, over 200 species of birds are awaiting to be admired.

800.361.3360

VisitLaredo.com

HERMANN SONS LIFE

LAREDO CONVENTION & VISITORS BUREAU



aredo

Generations of Texas families have trusted Hermann Sons Life to protect their family's financial future.

WHOLE LIFE
TERM LIFE
ANNUITIES

Spend time with the people you love. Don't spend time wondering whether or not you have enough life insurance. We offer a free, no obligation needs analysis. *Call or visit us online today!*

800-234-4124 www.hermannsonslife.org

WILD THING

PREHABINITY PADDLERS Paddlefish, the oldest animal species in North America, return to Caddo to Caddo.

BY EVA FREDERICK

DURING THE CARBONIFEROUS PERIOD, much of North America was underwater, and the parts that remained above the ocean were lush with swampy forest.

A lot has changed in the past 300 million years - coastlines receded, dinosaurs emerged and disappeared, and human civilization covered the earth - but one ancient fish species has stuck around to watch it all happen.

With a snout like a long, flat spatula and an often-open mouth, the American paddlefish is a distinctive-looking resident of Texas rivers and reservoirs. Its namesake "paddle" is about one-third of the length of the fish's entire body and is covered in tiny electroreceptors that help the fish find the best areas of water with snackable microscopic organisms.

These chubby, cartilaginous fish dine on tiny plankton and have no teeth at all. To

feed, they swim around with their mouths gaping wide, taking in large volumes of water and filtering it out through their gills, which are equipped with comb-like rakes to catch the plankton. This method of open-mouthed feeding lends them a permanently surprised look.

Paddlefish can grow up to 7 feet long and weigh over 200 pounds, although most are smaller (10-15 pounds). They are unique to the United States (the only other paddlefish in the world is the Chinese paddlefish, which has not been seen since 2003 and may be extinct); in some areas, they are thriving and are a popular game fish.

In Texas, however, paddlefish are

considered a protected species, and it is against the law to catch, kill or harm them in any way. The few remaining fish can be found in small numbers, mostly in the Sabine and Trinity rivers.

There's one critical obstacle to their survival. Although dams do a good job of controlling rushing floodwaters and providing calm reservoirs, these barriers make it difficult for paddlefish to reproduce because they require pulses of water to spawn.

Beginning in 2014, Texas Parks and Wildlife Department biologists (along with other conservation organizations) began a project to reintroduce paddlefish to the cypress-lined waters of Caddo Lake.

First, they worked out a way to release water from the adjacent dam at Lake O' the Pines in a way that mimicked natural conditions with higher and lower flow periods throughout the year. Then,

COMMON NAME American paddlefish

SCIENTIFIC NAME Polyodon spathula

HABITAT Large rivers, reservoirs

DIET

PHOTO [©] JENNIFER IDOL∕ENGBRETSON UNDERWATER PHOTOGRAPHY

Microscopic animals also known as plankton

DID YOU KNOW?

Like sharks, paddlefish have cartilage skeletons. Unlike sharks, paddlefish have no teeth. Come Visit Us For reliable service by a local family-owned store with award-winning designers and an

TEXAS

ORIGINALS

Our Texas Star Blue Topaz pieces are custom cut with a brilliant Texas star design and are set in-house in 14k scroll settings available in white or yellow gold.

8127 Mesa Dr. #301 Austin TX 78759 512-792-2622 regardjewelry.com

in-house certified watchmaker,

biologists outfitted four dozen young paddlefish with radio trackers and set them free in Caddo Lake. Later that year, they released 2,000 more.

TPWD fisheries biologist Timothy Bister recalls holding the young fish, their smooth, catfish-like skin slick beneath his fingers, and then watching, along with a crowd of other interested citizens, as the fish splashed away and <u>disappeared</u> into the murky water.

"We have done several of these paddlefish releases, and to see the public show up and the folks getting involved in the project, that is pretty exciting to see," he says.

So far, the paddlefish in Caddo Lake appear to be doing well.

"I am not in a place right now to say that they will ever come off the [threatened species] list, but it is encouraging to see paddlefish surviving," Bister says. "We are pleasantly surprised." *

NOVEMBER 2017 🛪 **15**

FLORA FACT





ON THE ESCARPMENT

This fall bloomer bears the name of the "Father of Texas Botany."

BY JASON SINGHURST

IN 1844, Ferdinand Jacob Lindheimer (1801–1879) settled in New Braunfels and was granted land on the banks of the Comal River, where he collected plants and attempted to establish a botanical garden.

Lindheimer, a naturalist and newspaper editor who is often referred to as the "Father of Texas Botany," was the first permanent resident plant collector in Texas. His Comal Street home is now a museum to honor his work discovering hundreds of plant species. One of the many plants he discovered is Lindheimer's crownbeard, collected for the very first time in 1847 in Comal County.

This showy, yellow-flowered (sometimes white) herbaceous perennial is a narrowrange endemic plant that primarily follows the Balcones Escarpment of Central Texas. Lindheimer's crownbeard is commonly observed in dry, rocky, calcareous soil in openings on steep, wooded slopes and uplands, and is often associated with plateau live oak, Ashe juniper, lacey oak, bigtooth maple, Arizona walnut, Virginia frostweed, red buckeye, Lindheimer's silktassel and deciduous holly.

Lindheimer's crownbeard is related to the fall-blooming frostweed; however, it lacks wings on the stems and its harshly scabrous (rough) leaves distinguish it from all other species in the genus *Verbesina* in Texas. It can bloom as early as May, but it primarily blooms in the fall, from September through November.

Lindheimer's crownbeard is a droughttolerant plant, so it works well in native landscaping. This plant is also attractive to bees, butterflies, many other insects and birds. Lindheimer's crownbeard is visited by migrating monarch butterflies in the

COMMON NAME

Lindheimer's crownbeard

SCIENTIFIC NAME

Verbesina lindheimeri

SIZE

15-30 inches tall

DID YOU KNOW?

More than 45 species and subspecies of plants have been named after Ferdinand Lindheimer, the "Father of Texas Botany."

fall, primarily in early to mid-October. There are a number of public places where you can observe this showy fall blooming plant: Balcones Canyonlands National Wildlife Refuge, Bright Leaf Preserve, Garner State Park, Hamilton Pool Preserve, Hill Country State Natural Area, Lost Maples State Natural Area, Old Tunnel State Park and Austin's Mount Bonnell.

Lindheimer's crownbeard is a showy wildflower that's worth searching for if you live in or happen to be traveling through Central Texas this fall. With a little botanical investigation, Lindheimer's crownbeard will reward you with its beauty, diversity of pollinators and history linked to Texas' father of botany. *





Dur Texas State Bluebonnet pieces are set in-house in 14k green gold or palladium and include fine blue sapphires, lush green tsavorites, and brilliant white diamonds.



8127 Mesa Dr. #301 Austin TX 78759 512-792-2622 regardjewelry.com

PICTURE THIS

THE DRONE AGE

Rules are catching up to increased use of aerial devices.

DRONES ARE REALLY taking off (pun intended)! More specifically, the numbers of drones and their uses are rapidly increasing as the multi-rotored devices are introduced into U.S. airspace for both commercial and recreational use.

While they may go by several monikers, such as unmanned aerial vehicle (UAV) or unmanned aerial system (UAS), the word "drone" has been adopted in contemporary vernacular and encompasses a wide variety of designs and sizes ranging from a few ounces up to 55 pounds for civilian uses. The Federal Aviation Administration (FAA) estimates that the total number of commercial and recreational drones in the U.S. in 2016 was 1.1 million. That number doubled in 2017 to 2.2 million, with the increase expected to continue as the public and industry find new applications such as aerial photography, video, mapping, wildlife

monitoring, agriculture, infrastructure inspections and search-and-rescue. The list is growing.

Aug. 29, 2016, was a game-changer for drone owners when the FAA released new regulations specifically for drones. Previously, drones were considered "aircraft" by the FAA and as such were regulated under a mishmash of existing traditional aircraft rules requiring commercial drone users to apply for various waivers from those aircraftcentric rules.

The new rules simplified things greatly by creating two categories of users: recreational or nonrecreational

(meaning commercial, civil or public use). Nonrecreational (commercial) pilots now operate under Part 107 of the federal aviation regulations and are required to be licensed and follow stringent operating rules. On the other hand, recreational or hobby users have very few restrictions, but the FAA furnishes several guidelines for flying safely in our increasingly congested airspace.

All pilots, especially newer ones, should be familiar with those guidelines and understand that it's an aircraft they're launching, not just a toy.

As a recreational pilot, here is what the FAA wants you to know.

- There is no pilot license requirement.
- Fly the drone below 400 feet and keep it in sight (visual line-of-sight).
- Be aware of any state and local laws regarding drones.



BY EARL NOTTINGHAM

- Notify airports if you are flying within 5 miles of the airport.
 Depending on the size of the airport, you may not get permission.
- Be aware of other airspace requirements. Know the "No Drone Zones" and other areas in which you cannot fly your drone. This includes flying in areas with TFRs (temporary flight restrictions) such as Washington, D.C., or near other aircraft, or in restricted airspace, such as at stadiums, airports, wildfires, etc.
- Give way to other aircraft.
- Do not fly over stadiums or sporting events.
- Do not fly over groups of people



CHECK THESE OUT

A fun and safe drone flight begins with a good preflight checklist; there are several smartphone apps available for drone pilots that will give you up-to-date information on any flight restrictions or considerations for your location as well as useful weather information. Try these:

B4UFLY Kittyhawk Airmap

and respect the privacy of anyone on the ground.

- Do not fly near emergency response efforts such as fires or search-andrescue operations.
- Do not fly under the influence of alcohol or drugs.
- Do not fly carelessly or recklessly with your unmanned aircraft — you could be fined for endangering people, property or other aircraft.

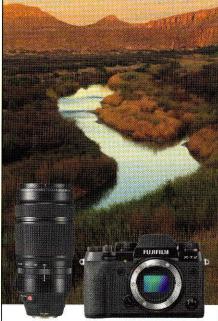
Additionally, there are some commonsense considerations for drone owners, especially when operating around wildlife and in public spaces.

- Do not fly over designated wilderness, primitive or other public areas where people seek the solitude and quiet those areas provide.
- Unless involved in research or management, do not fly at a low altitude near wildlife, especially animals in breeding or nesting environments. *

Please send questions and comments to Earl at *earl.nottingham@tpwd.texas.gov.* For more tips on outdoor photography, visit the magazine's photography page at *www.tpwmagazine.com/photography.*

SWITCH TO MIRRORLESS

EXCELLENT IMAGE QUALITY COMPACT & LIGHTWEIGHT QUIETER & EASY TO USE



FUJIFILM

FUJIFILM X-T2 24.3MP APS-C Sensor Internal UHD 4K Video Weather-Sealed Body Two UHS-II SD Slots

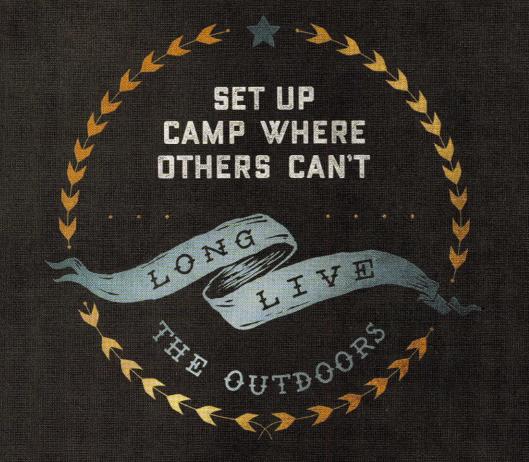
XF 100-400MM

152-609mm (35mm Equivalent) Aperture Range: f/4.5 to f/22 Optical Image Stabilization Weather-Sealed Design

FREE SHIPPING ON ORDERS OVER \$200



RAM HEAVY DUTY-

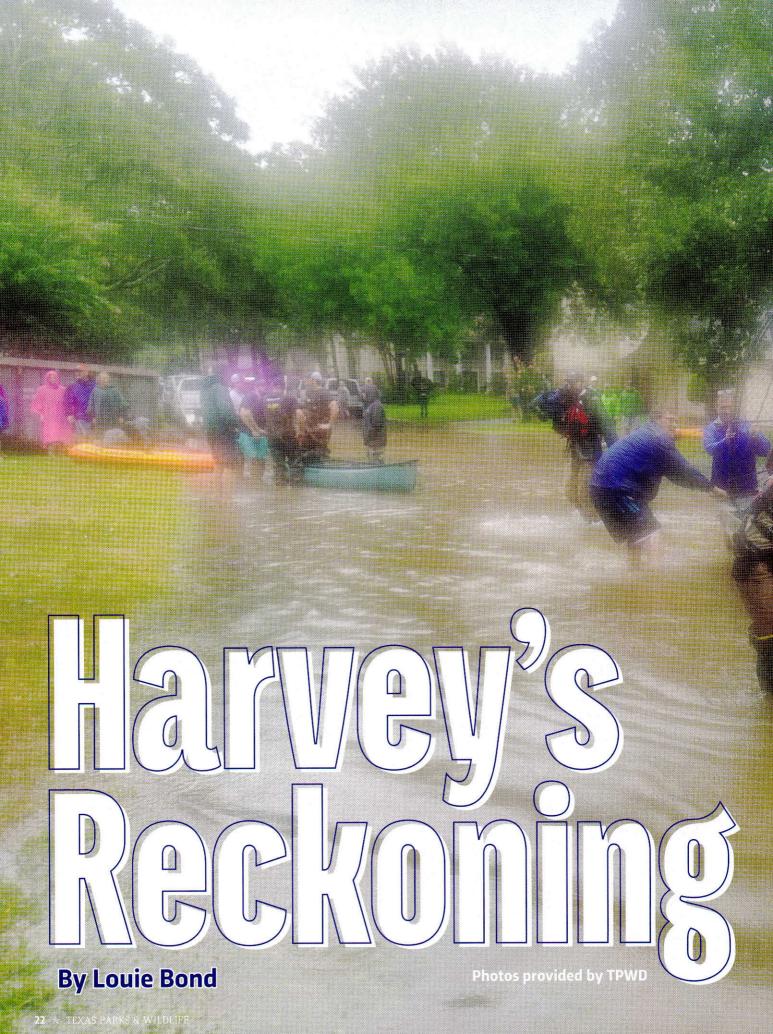


AMERICA'S LONGEST-LASTING HEAVY DUTY PICKUPS



RAMTRUCKS.COM





Game wardens, park staff and biologists step up after hurricane wreaks havoc.

PHOTO BY EARL NOTTH



Even though he's worked on the front lines of Hurricanes Ike and Katrina with Texas game wardens, *Texas Parks & Wildlife* magazine Chief Photographer Earl Nottingham was surprised by what he saw in the days that followed what's projected to be the costliest storm in U.S. history, Hurricane Harvey.

"From the beginning, there was an overwhelming response from locals who wanted to help," Nottingham says. "I don't know how many folks came up and saw the [TPWD] logo and asked what they could do. They were from all walks of life; some had boats in the back of their trucks."

Nottingham chalks it up to the Texas spirit, strong and full of hope, even in the face of catastrophe.

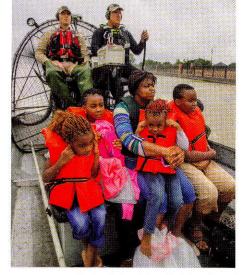
"There is just an attitude of 'gotta get it done' with Texans," he says. "They were on the ground helping even before the first responders arrived." Nottingham spent five days gathering images of Harvey's immediate damage, noting that despite the human tragedy, a sense of good humor prevailed as folks emptied out their freezers to barbecue for first responders and other survivors. Weeks later, he and photographer Chase Fountain have been documenting damage to Texas Parks and Wildlife Department properties, as others who work in the agency assess impacts to wildlife and fishing along the coast.

GAME WARDENS' SELFLESS ACTIONS

Texas game warden Dustin Dockery awoke in the early morning hours of Aug. 27 and climbed on the roof of his Baytown home to throw a tarp over a leaky spot. He decided to stay up and called in to let the emergency operations center know he was available to take calls. Less than 10 minutes later, the first call came in, and another day of rescuing South Texans from floodwaters began.

Hurricane Harvey had made landfall a few days earlier, pointing its powerful eyewall at Rockport and Port Aransas, creating wind and water damage along the Gulf Coast to Louisiana and inland to Houston and myriad smaller towns. Dockery sent his wife, Brooke, and their two tiny children (4 months old and 22 months old) to East Texas and safety with family.

After a long day of rescue and recovery on the other side of Baytown, Dockery went home to catch a little sleep at around 10 p.m. Some homes were flooded in his neighborhood, but his was still dry. The situation had changed by midnight, however, when Dockery awoke and found water beginning to seep in. He quickly moved his car to higher ground and tried to relocate a few possessions out





of harm's way. The water had already risen to his ankles, so he headed off to the local fire station. Remembering some needed paperwork, he returned briefly home to grab it a few hours later and found 2 feet of rising water and furniture beginning to float.

Dockery and longtime partner Daniel Pope continued running an airboat on missions from the firehouse. Exhausted, they tried to catch a few hours of sleep at the firehouse, but at 5 a.m. they were told to abandon the firehouse, with water rising. They took a militarystyle vehicle to another firehouse, but Dockery couldn't even finish a cup of coffee there before the first call came in. Transported by dump truck back to the first fire station, Dockery drove the airboat right out (it was already floating) to rescue an officer trapped with his wife and 3-week-old infant.

Dockery saw his house again on Tuesday from the airboat. This time, **Clockwise from left:** Port Aransas was one of many towns that suffered widespread damage from wind, rain and floodwaters; game wardens rescued thousands of people trapped by rising water; game warden Dustin Dockery's Baytown home flooded while he was busy rescuing others.

the water was nearly to the roof.

"I just shook my head," he remembers. "Then I went back to handling what I could. At that point, all you can do is go back to work. Thank goodness, my family was safe. If I'd had to deal with moving them...."

The partners were part of a larger force of more than 250 other Texas game wardens and 90 state park police officers engaged in active search and rescue missions; some included K-9 units, rescue swimmers and aircraft, as well as more than 210 rescue vessels. They were joined by game wardens from nine states, including Florida (128), Louisiana (67), South Carolina (28) and Arkansas (28), to rescue more than 10,000 people. Wildlife and Inland Fisheries personnel also assisted in the rescues.

Like all those who served, Dockery focused on the needs of others but eventually had to face his own harsh reality. Luckily, he was not alone.

"When people heard, the calls and texts came pouring in," he says. "They offered financial support, emotional support." The Dockery family is now living in a trailer in their driveway, and the house has been gutted. With so much help, they hope to spend Christmas in a remodeled home, with a complete finish in six months to a year.

Dockery reminds us that many others weren't as fortunate, including nearly 100 Texas Parks and Wildlife Department employees whose homes were severely damaged or destroyed. "So many still need help."

TPWD PROPERTIES DAMAGED

Initial assessments by TPWD staff found about 30 properties that suffered damage from Hurricane Harvey: four wildlife management areas, 15 state parks, eight Coastal Fisheries facilities and two Inland Fisheries buildings. Damage included everything from missing shingles and siding to destroyed roofs and doors and fee booths.

Brazos Bend State Park was inundated with more than 10 feet

of water, compromising electrical components and the structural integrity of screened shelters, limiteduse cabins, camping loops, a group dining hall, fishing piers and wildlife viewing areas throughout the park.

At Mustang Island State Park, the fee booth was heavily damaged, leaving only the concrete shell. The entire north-facing wall of a restroom was destroyed. More than 40 campsites, roads and a day-use parking area were still being assessed due to extreme damage to the area.

Goose Island State Park saw significant damage with roadways, bird-viewing platforms and signage decimated during the storm. The entire upper section of the fishing pier needs to be replaced as well as carports and wooden fences. The island retaining wall was also damaged.

Walls in the headquarters, administrative office and maintenance buildings at Stephen F. Austin State Park were damaged. Electrical outlets will be replaced in more than 15 screened shelters, a limited-use cabin and four restrooms.

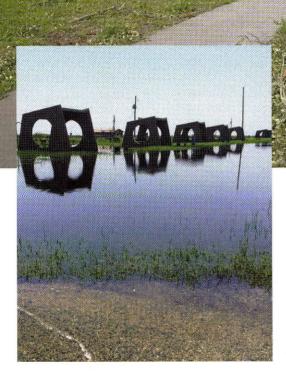
More park and WMA damage will be assessed in weeks to come.

SHELTER FROM THE STORM

When emergency shelters overflowed, 62 Texas state parks opened their gates wide to offer a temporary home to evacuees for the month of September. Fees were waived for more than 8,000 displaced Texans, who enjoyed the beautiful scenery and helpful hospitality they found there.

Cynthia and Royce Williams from Rockport found themselves enjoying a month's respite at Corpus Christi Lake State Park in Mathis. Every day they drove back to Rockport to work on getting their home livable for their children, who were staying with family in Magnolia. The Williamses remembered the first time they saw the damage to their "little piece of heaven" after Harvey's fury.

"That sea surge came and covered up our home ... and we live a



↑ Galveston Island State Park suffered from flooding but reopened by the end of September.

Mustang Island State Park sustained significant damage to roads and buildings. →



↑ At Goose Island State Park, not far from where the eye of the hurricane made landfall, the iconic Big Tree stood strong. Many other trees lost limbs. Repairs will be needed on park roads, piers, fences and buildings.



↑ San Jacinto Battleground and Battleship Texas were not damaged but remained closed for a number of days because of flooding.

couple of miles from the water," Cynthia recalls, wiping her eyes. "It's heartbreaking when you see everything you've worked for mangled and covered in seagrass and silt and mud."

Royce grieved the trees Harvey ripped up.

"When you think of Rockport you think of live oaks," he says. "We had 48 large oak trees; now I've got 14 left. These were trees that took hundreds of years to get to where they were, and this storm just snapped them and laid them down like it was nothing. Not just at our place, but at every place. It's not going to be the same."

The couple still found a way to laugh between the tears and enjoy the beauty of their surroundings.

"Staying at the state park — it's like a vacation," Royce says with a smile. "We love it. We go back to the devastation every day, but we come back here and wake up to deer. It's definitely been a blessing. We've visited this park since the kids were itty-bitty. The staff has been absolutely awesome."

Another Rockport resident, Stacy Barefield, says her apartment was condemned and she and her children slept on a mat in the yard the first two days.

"It was a scary situation, and we were eaten up by mosquitoes," she recalls. "I'm overjoyed that the state park let us stay here. Without that, I don't know where we'd be at this point. These people have been so nice — so many people opening up their hearts and helping us any way they can. You take everything for granted until you have everything taken away from you."

Like the Williamses, Barefield found enjoyment in the park facilities, lifting her spirits even in hard times.

"What more could you ask? They even let me pick my view," she says of the family's temporary shelter. "We have fishing and swimming, showers and restrooms. That's more than we had two weeks ago."

IMPACT ON TEXAS WILDLIFE

After a few early reports of misplaced snakes and alligators,

Don't forget the dogs: Rescuers took time to save pets amid the chaos of the storm and its aftermath.

skunks and raccoons, most wildlife will return to their usual habitats after severe weather, says John Davis, TPWD Wildlife Diversity Program director. While it might take some time to complete assessments of long-term and short-term storm impact, most wildlife populations are fairly resilient.

"These species evolved with hurricanes and floods, so they will recover," he says.

Many small mammals, reptiles and amphibians seek higher ground while waiting out storms. Deer will fare well, with just some loss of fawns, though some will have been old enough to swim to high ground. What could have the most impact, says TPWD Wildlife Division Director Clayton Wolf, is damage to habitat.

"Depending on how long it takes for the water to recede in the larger river bottoms, landowners may experience at least a temporary movement or displacement of wildlife species at some scale," Wolf says. "If vegetation is inundated for an extended period, there will be defoliation of woody species and mortality of herbaceous species. Until the new vegetation germinates or the existing vegetation re-sprouts, there could be very little forage in some areas for a while."

Some late bird nests and nestlings could be affected by the storm, but most birds will survive. However, the prognosis is more guarded for some of the Coastal Bend's waterbirds and shorebirds — roseate spoonbills, great egrets, snowy egrets, reddish egrets, great blue herons and black skimmers — that already have a tough time finding a safe place to nest, writes frequent *Texas Parks & Wildlife* magazine contributor David Sikes in the *Corpus Christi Caller-Times*.

Both tree-nesters and ground-nesting birds have been affected. Those that nest higher up will find that Harvey downed many trees and bushes; ground-nesters will find their vegetated islands, dunes and sandbars changed or obliterated. Both types of birds need



those rare spots with no threat from predators or humans; those habitats will be in even shorter supply now.

Salinity issues are a concern for marine life, post-Harvey. It may take weeks for fish to return.

"The volume of freshwater flowing into Galveston Bay is unprecedented," says Lance Robinson, deputy director of Coastal Fisheries for TPWD. "Most fish will temporarily leave the bays to avoid the freshwater but will return when conditions become more favorable."

The situation looks worse for Texas oysters. Oysters experience 90 percent mortality when salinity hits less than 2 parts per thousand.

"With the volume of water that's flowing through Galveston Bay, salinities will be 0 parts per thousand," he cautions.

**-

Hunting and fishing license sales are not immune to the effects of Mother Nature. A decrease could have a negative financial impact on the agency, especially combined with property damage and emergency management costs, estimated to start at \$50 million. Despite that, TPWD Executive Director Carter Smith prefers to shine a light on the people and programs who will lead the recovery.

"I have always said that TPWD shines the brightest when times are the darkest," he told employees. "Hurricane Harvey has been no exception."

Louie Bond is the editor of Texas Parks & WIldlife magazine.

healing land Dixon Water Foundation wins Land stewardship award for bolistic management.

HOTO BY EARL NOTTINGHAM / TPV

When Casey Wade stepped onto the high desert grassland of Mimms Ranch in West Texas, he found the ground as hard as asphalt and dusty beneath his boots. The land was balding, its carpet of greenish-blond grass receding, leaving parched bare patches sprinkled across the rolling desert plains.

"The land was so dry," says Wade, the vice president of ranching operations for the Dixon Water Foundation. "There were large patches of bare ground, and it just baked in the sun – it became like concrete with a hard crust on it, and nothing grew."

That was in 2010. The 11,000-acre parcel had just been purchased by the Dixon Water Foundation, a nonprofit organization dedicated to cultivating healthy watersheds through sustainable land management.

In the following years, Wade and the other members of the small foundation set to work to restore this land to its natural state — the short-grass prairie environment that dominated this part of West Texas before the arrival of European settlers. Their management system, called adaptive multi-paddock grazing, used only one tool:

livestock.

By Eva Frederick

By moving cattle frequently from one small pasture to another, allowing the vegetation time to recover, the ranch managers cultivated the growth of healthy prairie grasses and improved the soil so much that a creek, dry for decades except when swelled by torrential runoff, began once again to flow more consistently through the property. Seven years later, thanks to the Dixon Water Foundation, the land is thriving.

This year, the foundation's hard work gained national recognition by winning Texas' top conservation honor: the Leopold Conservation Award. The Sand County Foundation, a national nonprofit land conservation organization, presents the \$10,000 award to one rancher or organization each year in honor of conservationist Aldo Leopold. Unlike past Texas honorees, the Dixon Water Foundation is not an individual landowner but a nonprofit organization focused on the bigger picture of Texas' land health.

The Dixon Water Foundation began in 1994, the passion project of the late Roger Dixon, a longtime rancher and conservationist. The first ranch the foundation acquired was the Leo Ranch in Cooke County; it now manages six ranches in North Texas and West Texas, using the land as an example of how regenerative land management can improve the health of soil and watersheds.

The Dixon management techniques produce many benefits. Because a large number of Texas ranchers already have cattle, the foundation's strategy of using livestock as a management tool makes the system attainable for the average landowner. The foundation has always made the financial side of its ranching operations a priority — not

After years of work, prairie grasslands thrive at the Mimms Ranch. only is its method environmentally sustainable, but it also makes a profit as a livestock operation.

"You're not just taking land and focusing on the ecological aspect," foundation CEO Robert Potts says. "You're achieving the ecological aspect while at the same time supporting the economic and the food aspect. In other words, you don't have to be rich to do this."

When Lance Irving, Leopold Conservation Award program director at the Sand County Foundation, visited Mimms Ranch for the first time, he was struck by the thriving prairie grasses on the foundation's land.

"When you drive past their ranch, you can look and see that their ranchland looks different," he says. "There is more grass there, the environmental indicators are different there, and different in a positive way. It lets people know that whatever these folks are doing, it's something that is working."

THE METHOD

Driving by the foundation's North Texas properties in August, it's obvious when you enter Dixon land — on the roads bordering the Leo Ranch, field after field of lush prairie speed by, glowing sage-green with bluestem and Indian grass.

Before westward-traveling colonists spread across North America, much of the U.S. was traversed each year by thousands of migrating bison. The animals trampled the ground and grazed down the vegetation, but they didn't stay anywhere for too long. A herd would pass through briefly and then depart, leaving time for the grasses to regrow before they were grazed again. The foundation's grazing system mimics this natural process. Instead of the widespread technique of continuous grazing, where livestock remain on a large area of land for extended periods of time, adaptive multi-paddock grazing keeps a large amount of cattle or other livestock on a small amount of land for a short period of time. The cattle graze widely and indiscriminately. And as they stomp the ground (breaking up the soil) and leave their rich manure, they stimulate deep root growth in existing plants on the surface. The land is then left to recover for up to a year.

"That vegetation covering on the soil is absolutely essential to moderating the temperature of the soil, creating a condition where the microlife of the soil can thrive and do all the things that they do for us," Potts says.

One of the key duties of this teeming array of microorganisms each teaspoon of soil contains several billion bacteria, fungi, nematodes and more — is to aggregate the soil so it retains more water. Another is to provide nutrients needed by grasses and other plants.

The resulting thick covering of grass leads to a large amount of decaying organic matter in the soil. The soil holds, or sequesters, the carbon in the organic matter and keeps it out of the atmosphere while also retaining more water.

Research by Richard Teague of Texas A&M University backs up the benefits of this method of grazing for building a prairie ecosystem that is healthy and balanced. In his long-term study on the Dixon ranches, he showed the pros of a holistic system for soil health and deep-rooted grasslands.

"You have to manage the grass because the grass results in the maximum water getting in the ground," he says. "You manage for that because it drives the whole system."

LOOKING AHEAD

To the casual observer, it might appear that the foundation has accomplished its goal: healthy, green land, soil teeming with microlife and well-functioning watersheds. But the aim of the Dixon Water Foundation was always broader than that.

The goal of the Dixon ranches, says foundation chairman Clint Josey, is to serve as examples of the benefits of sustainable land stewardship.

Josey, who has been with the foundation longer than anyone else — he set up the backbone of the organization after Roger Dixon died in 2005 — says one of the most important parts of the foundation's mission is its focus on education.

Through grants and scholarships partially funded by the profits from the ranches, the foundation funds programs at colleges that offer range management degrees. Members of the foundation also host a variety of courses and tours on their ranches. On the Leo Ranch, the Josey Pavilion, a highly sustainable "living building," serves as a sort of outdoor classroom for adults and children alike.

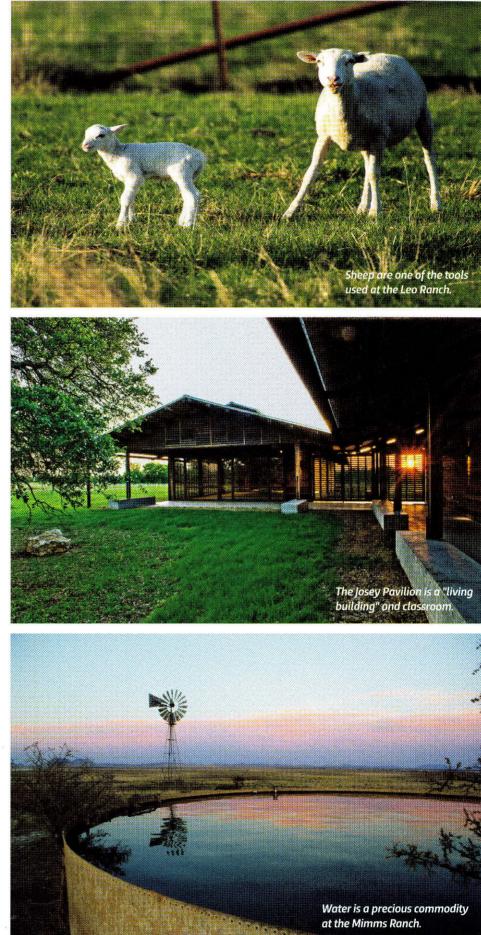
Casey Wade is quick to point out that for all its benefits, this system of management is not a fast and easy remedy for degraded land.

"This is not a quick fix at all," Wade says. "You know, if you have mesquite trees you spray 'em, and you walk out a week later and they're brown and dying, what have you done long term? [Our system] is a long-term management strategy."

Overall, though, maybe its longterm nature is what makes the Dixon land management system so effective.

"Anybody can learn to do this in a short time," Wade says. "It might take you the rest of your life to perfect it, but anybody that has a piece of land and wants to graze it can do this. There's a lot of satisfaction in being able to work with nature, and see it work."

Eva Frederick is the editorial intern for Texas Parks & Wildlife magazine.



The challenges of paddling and protecting a wild river.

By Pam LeBlanc • Photos by Erich Schlegel

32 * TEXAS PARKS & WILDLIFE

The Devils River bashes your legs, blasts you with

110 syou with reed mazes. But a four-day trip on this twisting ribbon of turquoise, which cuts across remote southwest Texas, will make any hardy paddler swoon with happiness and seek to protect this Texas treasure.

Halfway down a tumbling, boulderstrewn rapid, the aluminum canoe I'm paddling wedges on a rock. I step out to push, and seconds later, the Devil yanks it from my grip.

As my paddling partner holds the boat's nose in place, I grab tight to the tow-line and we creep through the rapids, trying to stay upright. My shins ram into one boulder after the next, and when we're finally down Three Tier Rapids, blood trickles down one leg like wax on a melting candle. And, oh, the bruises — days of clambering in and out of a metal canoe have turned my thighs into a Vincent Van Gogh *Starry Night* canvas.

I'd wanted to run the Devils River for years, and finally got the opportunity last spring, a few months after the Texas Parks and Wildlife Department opened two new primitive paddle camps along the route. Friends warned me that this was not a trip for beginners or the faint of heart; experience and plenty of planning are absolutely essential. We make reservations and doublecheck our lists.

Four of us load up our gear, drive to Del Rio for a night, then get up early for the 30-minute drive to Amistad Expeditions, the outfitter we hired to shuttle us to our put-in point at Baker's Crossing, an hour and a half away. From there, roughly 30 river miles awaited. Or rather, 30 rough river miles awaited.

As we drag our boats down the bank and clip in dry bags filled with our dehydrated meals, water filters, camp stoves, tents, sleeping bags and access permit, I wonder for the hundredth time if I'm ready.

"You're going 12 miles today?" the shuttle driver asks, barely concealing his skepticism as he eyeballs us. "Most folks just go 7 or 8 miles a day, you know."

The warnings I'd heard flash through my mind: If you snap a leg

on the Devils, no one can help you for hours — or even days. Step onto shore and someone might point a gun at you. Rookie paddlers shouldn't even attempt it.

Charcoal gray clouds scud across the horizon as we push into cool green water, dip in our paddles and begin.

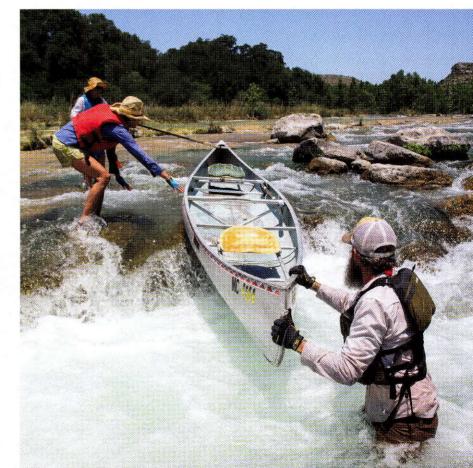
At first, we glide along easily. A mile and a half in, though, the dragging begins. Our canoe chokes on bony fingers of limestone, and we hop in and out of our boats every few minutes, tugging and pushing. As tedious as it is for my paddling partner and me, the kayaker in our group gets it worse. The rock grabs his boat like Velcro, and he hikes more than paddles.



We tick off the miles, though, passing through narrow channels followed by broad, windy stretches. We point our boats down one rocky slide after the other, grateful when we don't capsize. And 12 miles later, we roll into a patch of grass set aside for paddlers, pop up our tents, heat water for dinner and stare up at the stars.

If you make this trip, come prepared. The rocks jab, the plants snag and the chiggers bite. Bring your muscles and good attitude, too, because you'll have to hoist your boat over obstacles, encounter marauding raccoons and utilize WAG bags when nature calls.

You'll also understand why so many people are determined to protect this river.



"Without question, the river is a special piece of Texas," says Beau Hester, superintendent of the Del Norte Unit of Devils River State Natural Area. "We want to make sure we're being good stewards, educating folks and preserving the wilderness experience the Devils River offers."

The two relatively new riverside camps stand as an example. The river has seen a large increase in usage recently, from a few hundred paddlers a year in the 1980s to that many in just one month last spring, Hester says.

The new camps, leased by the Texas Parks and Wildlife Department, offer a safe — and legal — respite for paddlers once tempted to pitch tents on private land adjacent to the river. Paddlers need permits to camp at the sites; the department issues a limited number of access permits per day (12 for overnight trips; 12 for day trips) to ease the strain on the environment. It helps that the river is located far from the nearest city.

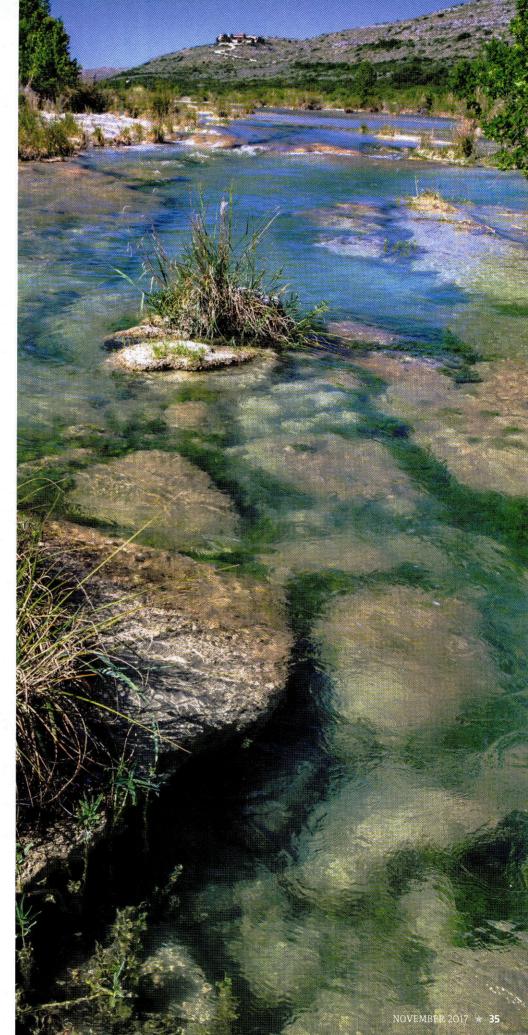
"Because of its location, this place is what it is today, and, hopefully, there's continued stewardship so we can keep it what it is," Hester says.

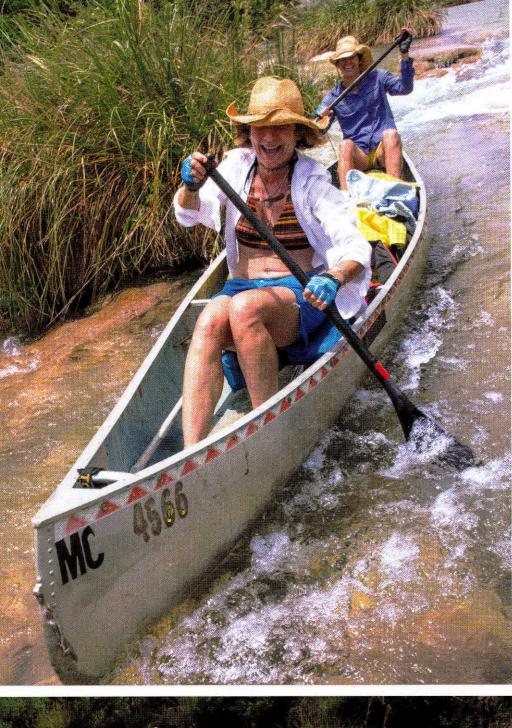
Two other things set the Devils River apart. One, it's a rare, wild, freeflowing river, one of the only major rivers in the state not impounded by a reservoir (though it flows into Lake Amistad in its lower reaches). Second, springs burble up along its entire twisting course.

"A lot of rivers have springs at their headwaters, but the Devils has them the whole length, which helps keep water quality and clarity of the river intact," says Sarah Robertson, an aquatic biologist with the Texas Parks and Wildlife Department.

The river cuts through the nexus of three eco-regions, creating a hot spot of diversity for wildlife like the threatened Devils River minnow, Conchos pupfish and Proserpine shiner, plus the endangered black-capped vireo. Monarchs migrate through the region; bats patrol night skies.

"A lot of rare and endemic species occur there," Robertson says. "It's important that while we appreciate and utilize the river, we minimize the impact so we aren't endangering those species."







The next morning, the kayaker (and musician) in our group, Tony Drewry, pulls out his beat-up river guitar, serenading us with songs. Photographer Erich Schlegel grabs his fishing rod and paddles upstream in pursuit of a giant fish. My canoe buddy Marcy Stellfox and I float down the river a little ways for a swim. The morning coasts by, unrushed and luxurious, fat with sunwarmed rocks and long green plants that stretch out and wave at us from beneath the water's surface.

We shove off again after lunch.

An hour in, we hear the rush of water. A couple of fishermen are perched on a sculpted wave of rock that forms one side of a little chute we're fast approaching.

I stab my paddle into the water, trying to aim our boat around one chunk of rock, then readjust and steer it in the opposite direction. We clank against one side, bounce off, holler and ride the water into the next pool. The guys on the rock cheer, and we throw our paddles overhead in victory.

To celebrate, we unpack one of the hammocks we've brought along, strap it to a milk-truck-sized, ferncovered chunk of rock plopped in the center of the river, and bask in our accomplishment.

Then it's onward. We've got just another mile or two to our next camp at the Del Norte Unit of the Devils River State Natural Area. The river spreads out, and we pass a series of gushing springs and meet a few researchers out on the river to test water temperatures.

As we pull ashore at the San Pedro campsite, dark clouds build to our south. We set up camp, and just before sunset I strike out to climb a nearby ridge, nearly stepping on a hairy tarantula along the way. At the top, I'm rewarded with a dusky, glittering view of the Devils as it flows south toward our next big obstacle, Dolan Falls.

That night, the raccoons invade. They scurry in and out of our canoes, rummage through our gear and snuffle around our campsite. One marauder even nibbles a hole in the corner of our tent, as a reminder that he's the local and we're the outsiders. We awake the next morning to discover a hummingbird guarding a nest holding two grape-sized babies. We admire them for an hour, then paddle a quarter-mile downstream to explore another glimmering, gin-clear oasis of spring-fed water. When we paddle back out to the main flow, the land opens up, the hills swell and the river deepens. We've made it to the most beautiful stretch of the trip.

We're also quickly at the top of Dolan Falls.

We pull our boats off to the side and wade ahead to check the situation. The falls plunge at least 15 frothy feet at Dolan, and you can't paddle a canoe through the chaos. We work together, emptying gear out of our boats, tossing dry bags across swirling currents and lugging our crafts through the raging water. It takes an hour, but when we finish, we leap giddily off the rocks and smile up at the blazing sun.

We've got less boat dragging to do these last few days on the river, but more rapids, too. We navigate one potentially leg-mangling stretch of roiling water after the other, exhaling with relief when we finally approach the Mile 20 camp.

Three other groups of kayakers are camped here, too. We find a spot on the narrow spit of land, cook dinner and make more music. Two of us spend the early hours of nightfall practicing our night photography skills; the others snore it up.

I wish we had more time out here, but tomorrow we'll paddle our last river miles to the Dan A. Hughes



Unit, where our shuttle driver will pick us up and deliver us back to civilization. I stare up at the dark sky and listen to the river.

We take our last day slowly, trying to suck every last minute of prickly Texas beauty out of the river. We duck through canyons and ogle huge slabs of rock that look like a giant dropped them out of his toy bag.

In one spot, we park our canoe and scramble onto the top of a bus-sized chunk of rock in the middle of the river. The white rock bottom makes the water glow. We jump off, climb back in our boat and enjoy the easy paddle to the take-out, telling stories along the way.

A few other paddlers are already gathered beneath the trees when we get there, waiting for their shuttles. We unload our boats and hang our hammocks. That's when I meet Benny Salazar, 52, of Telferner, who's just finished a two-day trip on the Devils. He tells me he carried a snapshot of his dad, who died in 1979, and dedicated the adventure to him.

"I wish he was here with me," Salazar says, and I understand. "I said a little prayer for him. I told him I miss him, you know?"

I'm reminded that I should do one more thing before I leave this special place.

I head down for a final dip in the teal-colored water, beneath a cliff squawking with swallows and hawks. I swim back and forth for 20 minutes, savoring the solitude and the serenity.

I thank the river for the fun, and bid it goodbye. In my heart I add a sincere promise to take care of it as best I can.

Pam LeBlanc is a staff writer for the Austin American-Statesman.

The Devils River, rugged and unspoiled, remains one of the most pristine waterways in Texas. Careful stewardship is required of all visitors in this remote land of clear springs and desert canyons.

Devils River access permits are required for paddlers who use either of the two units of TPWD's Devils River State Natural Area — the Del Norte Unit and the Dan A. Hughes Unit — for trips that extend beyond the boundaries of the state natural areas.

TPWD issues a maximum of 12 individual permits each day for overnight trips and 12 permits per day for day trips. The permit system was developed to manage sustainable recreational use of the river and promote responsible stewardship. TPWD encourages the safe and responsible use of the river resources of our state and reminds those using the Devils River or other waterways that irresponsible use of rivers cannot be condoned and could result in criminal charges or serious personal injury. Most of the land along the Devils River is private property; trespassing is prohibited.

Designated campsites are available along the river for paddlers who possess Devils River access permits. Campers must use a WAG bag to carry human waste, pack out all garbage and arrange their own shuttle transportation.

For more information, go to *tpwd.texas.gov/ devilsriver.*

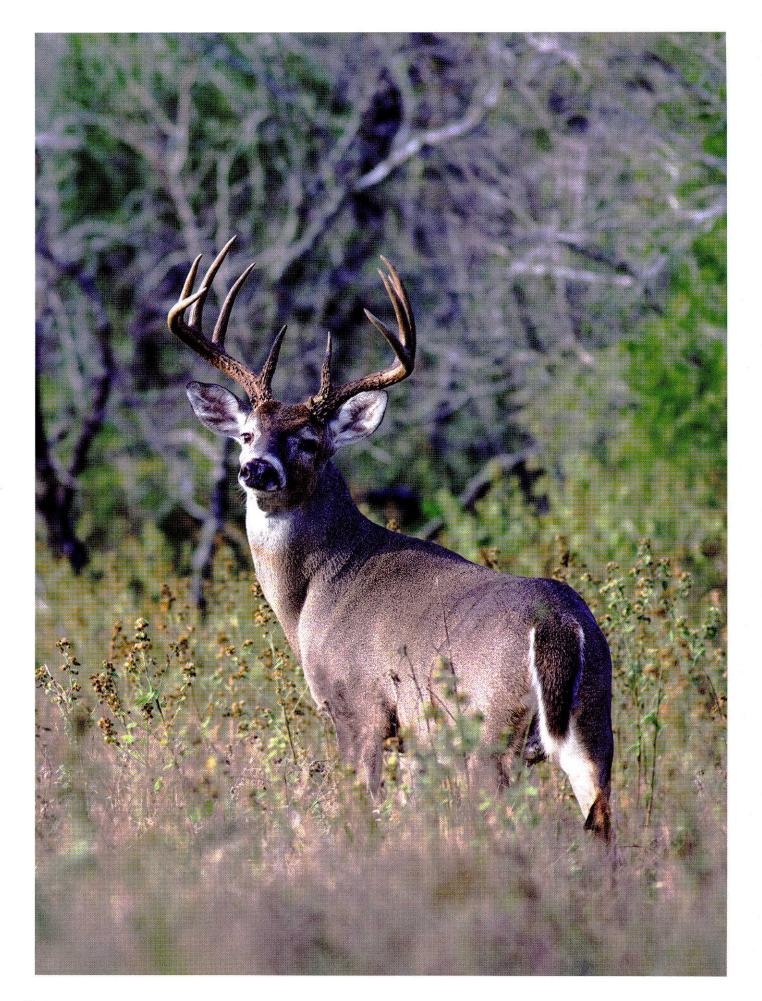




It is a ritual as old as the land itself: a need to propagate the species, to breed and sustain life. And in Texas, the whitetail "rut" is probably the most anticipated of all mating rituals, a period of high energy for the deer, bucks and doe alike, as hormone levels peak and the need to breed is often accompanied by activities defined by "rubs," "scrapes" and an aggressive competition between males.

Indeed, it is the season of change within the population of antlered species, and one that lends mystique to those people who engage the outdoors each winter in the Lone Star State.

By Wyman Meinzer



← This magnificent specimen of a whitetail in full rut exhibits a swollen neck from hormone changes and the work of rubbing scrapes.





✤ Bucks secrete pheromones through glands located beneath their eyes. This whitetail is rubbing branches on a mesquite, leaving these secretions behind — a notso-subtle message that he is ready when a receptive doe happens by.

← A younger buck gives ground to a bigger whitetail during the rut.

Next page:

Two bucks do battle at dusk on the Rolling Plains.









↑ A South Texas dominant buck guards his doe from satellite bucks, usually younger animals who will yield to any aggressive action taken by the guardian buck.

A TIMELINE OF THE TEXAS OUTDOORS



2010 A new state-of-the-art Game Warden Training Center opens in Hamilton.



2011 The Texas state bison herd is released into expanded territory at Caprock Canyons.

LEGACY



Looking back at... THE 2010S

Hey, wait a minute. This decade isn't even over yet. As *Texas Parks & Wildlife* celebrates its 75th anniversary, we've been taking a look back through the decades of the magazine's existence, starting in the 1940s. And now we're here, in the present, looking at ourselves. *Awk-ward!*

The decade started off in a challenging way, environmentally. The Deepwater Horizon oil spill soiled Gulf Coast beaches. Droughts and wildfires ravaged the state, with 2011 being the driest year on record in Texas and the Bastrop fire becoming the most devastating wildfire in state history.

This year has been rough, too, with Hurricane Harvey wreaking havoc on coastal Texas.

Things have got to get better. At least we can eat Blue Bell ice cream again. And yeah, Willie Nelson is still with us. That *Boyhood* movie was pretty cool. And who knows, as progress marches on, maybe by the end of the decade we'll be able to use our 3-D printers to make self-driving cars to take us around our great state.

FOR THE BIRDS

MAY AND AUGUST, 2010 - 2012

We kicked off the decade with twice-yearly birding calendars, helping Texas birders know where (and when!) to go on their search for feathered fun, as well as what they might see when they get there. **2012** Chronic wasting disease is found in West Texas mule deer, the first occurrence in Texas deer.

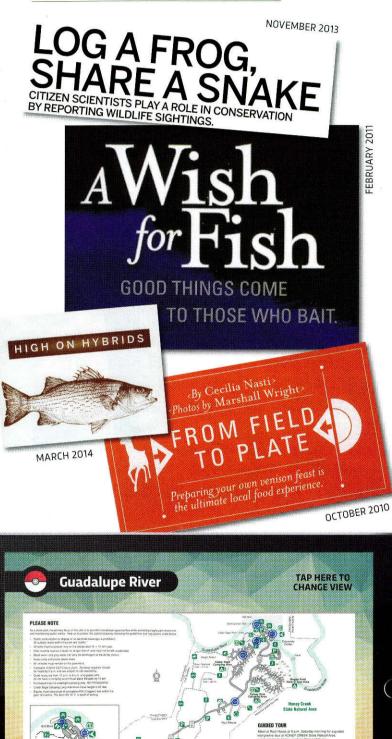


2014 The 17,351-acre coastal Powderhorn Ranch is acquired as a future state park.



August 2016 "Lake Dudes" videos use humor to stop invading giant salvinia. Brah-vo!

HEADLINES OF THE DECADE (SO FAR)



WE SEEMED TO HAVE MORE DEER STORIES THAN DEER AT OUR GONZALES COUNTY PLACE.

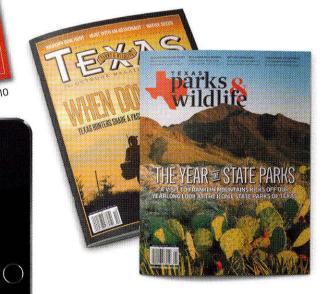
THAT'S RIGHT, WE SAID IT...

NOVEMBER 2011

THEN AND NOW: REDESIGNING THE MAGAZINE

JANUARY 2016

After 16 years with a scrolling banner logo, we undertook a major redesign, looking forward to the next decade and beyond.



POKÉMANIA SUMMER 2016

We weren't immune to the Pokémon Go craze that swept the world in 2016, publishing a Pokémon hunters guide to state parks in our app.

RECIPES FOR LOCAVORES

AUGUST 2013, OCTOBER 2010

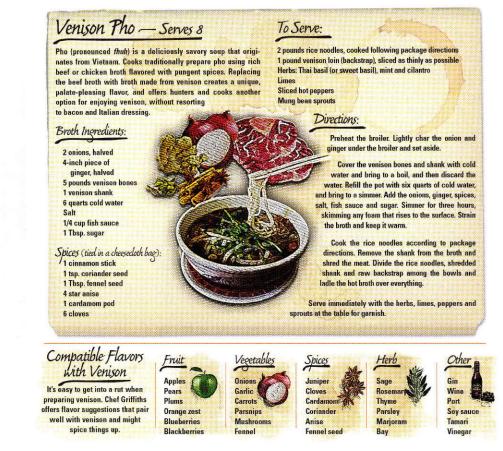
RECIPES

(more online with this story at www.tpwmagazine.com)

Wild Plum Jelly (From Janell Turner of Claude) 51/2 cups prepared plum juice (see below) 61/2 cups sugar 1 box Sure-Jell Fruit Pectin 1/2 teaspoon butter or margarine Start with about 5 pounds of olums. Remove pits; do not peel. plums. Remove pits; do not peel. Put in pot with 1½ cups water and cook until tender. Mash through colander to strain. Bring juice to boil, reduce heat, cover and simmer 10 minutes, stirring occasionally. Measure 51/2 cups juice into 6- or 8-quart saucepan. Measure sugar into separate bowl. Stir pectin into juice. Add butter. Bring mixture to full rolling boil on high heat, stirring constantly. Quickly stir in all sugar. Bring back to full rolling boil and boil exactly I minute, stirring constantly. Remove from heat, skim off any foam with metal spoon. Ladle quickly into prepared jars.

Persimmon Chiffon Pie Graham cracker crust 1 cup persimmon pulp 4 eggs, separated ½ cup and ¼ cup sugar 1 envelope unflavored gelatin ¼ tsp salt

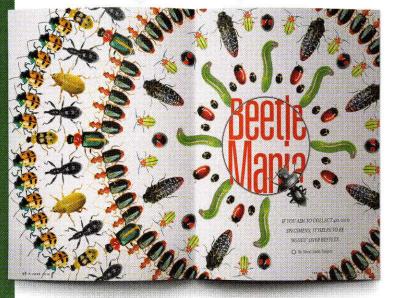
Beat pulp and egg yolks together. Mix ¹/₂ cup sugar, gelatin and salt in saucepan. Add pulp and yolk mixture to saucepan. Cook and stir until mixture just comes to a boil. Remove from heat and cool, stirring occasionally, until mixture mounds up on a spoon. Beat egg whites until they form soft peaks. Add ¹/₄ cup sugar and continue beating until stiff peaks form. Fold in the cooked persimmon mix, pile into graham cracker crust and chill.



THAT'S RIGHT, WE SAID IT...

Little has been communicated about what effects the border fence might have on wildlife, land management practices and ecotourism in one of the state's most impoverished regions.

AUGUST 2011



THE BUGGISH INVASION

JUNE 2010

They're creepier and crawlier than the Addams Family, but this may be our favorite spread of the past 75 years.



THE EYES HAVE IT

FEB. 2010, JAN. 2012

Possibly inspired by "Lord of the Rings" movies, the "Eye of Sauron" makes appearances as a design element.

PROTECT THE LAKES YOU LOVE.

CLEAN

Remove all plants, mud and debris from boat, trailer and gear.

DRAIN

Drain boat, motor, gear and other water-retaining compartments.

DRY

Let boat and gear dry for a week or more before visiting another lake, or wash everything thoroughly with high pressure water.

STOP INVASIVE SPECIES LIKE GIANT SALVINIA TPWD.TEXAS.GOV/GIANTSALVINIA

1122



and the second



THE NEXT Great Italian Masterpiece

The Argento Byzantine Necklace is an impeccable work of art with a price unmatched by any in its class.

Da Vinci's Mona Lisa, David by Michelangelo, Madame Butterfly by Puccini. Italy has produced some of the world's greatest masterpieces. And, it's no secret it is the epicenter of the best metalworking on earth. Which is why we sought out one the best artisans to ever melt precious metals to create yet another great Italian masterpiece. For over two decades, our designer has pursued his passion for making jewelry of great beauty inspired by the Tuscan countryside. The *Argento Necklace* is his latest masterpiece. *And, you can own it for under \$80!*

Each necklace is meticulously made by hand from pure sterling silver and celebrates the traditional woven Byzantine design— an intricate array of woven links that forms a flexible and elegant drape. Passing the test of time and surpassing the definition of beauty, the **Argento Byzantine Necklace** is perfect for the lady who appreciates fine art. And, priced for those who appreciate a fine value.

The difference between priceless & overpriced. High-end design should not carry a high price just because it comes from a big name retailer, where you'll find a similar necklace going for four times as much. We prefer to keep our costs low so we can bring you the very best in Italian design at a cutting edge price.

Masterpiece, not mass produced. It takes months to create just one of these necklaces which means we have a select number available.

No questions asked, 30-day money back guarantee. We want you glowing with satisfaction. You have nothing to lose, except the opportunity to own a masterpiece. Call today!

Raffinato[™] Argento Byzantine Necklace Stunningly affordable **\$79** + S&P What our Italian jewelry expert Daniele Zavani is saying about the Raffinato[™] Argento Necklace: Bellissimo! Stupendo! Magnifico! The classic Byzantine chain pattern has stood the test of time for over 2,500 years

Made in Arezzo, Italy
 . .925 sterling silver
 . 18" necklace; lobster clasp

Also available Raffinato[™] Argento Byzantine Bracelet Stunningly well-priced at \$39 + S&P

Call today. There's never been a better time to let your elegance shine. 1-888-444-5949 Offer Code: RFC199-01. You must use the offer code to get our special price.

Raffinato™

14101 Southcross Drive W., Dept. RFC199-01, Burnsville, Minnesota 55337 www.raffinatoitaly.com A collection of impeccable design & craftsmanship from Italy.

Own the "Gem of the Century"



Incredibly rare find is now available to the public for ONLY \$59!

For centuries, the "Big Four"—diamonds, rubies, emeralds and sapphires—ruled the gem world. When tanzanite debuted in 1967, it was a sensation. Unlike those other stones, which are mined all over the world, tanzanite can be found in only one place on Earth: in the remote Merelani Hills in the shadow of Mt. Kilimanjaro in Tanzania, Africa.

<u>Huge Savings</u> Take 85% OFF the Karatu Tanzanite Ring when you use your offer code

Gem of the century meets deal of the century. With its remarkable rarity and unique gemstone qualities, it's no wonder that experts have dubbed it, "the gemstone of the 20th century." In recent years, top-quality tanzanite gems have fetched higher prices at auction than rubies, emeralds or diamonds! But because we buy direct and use our own designers, we are able to offer you this rare beauty for ONLY \$59!

What makes tanzanite so irresistible to jewelers and gem experts? Part of its appeal is the beautiful violet blue color. Tanzanite is also trichroic—which means that three different colors are visible when the stone is viewed from different angles.

"This ring is unbelievable. I've owned some spectacular high-dollar gemstones in my life and this ring will compete with any of them!" —Katharine, Shreveport, LA Henry Platt, past president and chairman of Tiffany & Company, called Tanzanite "The most important gemstone discovery in over 2,000 years."

A gemstone found only one place on earth, means supply is extremely limited. Get your hands on the *Karatu Tanzanite Ring* before they're gone!

Your satisfaction is 100% guaranteed. Experience the rare beauty of the *Karatu Tanzanite Ring* for two months. If you're not completely awestruck, simply send it back within 30 days for a complete refund of the sale price. We want you to feel like you got the deal of the century!

With over 4,000 sold, we currently have less than 2,000 in stock!

Karatu Tanzanite Ring +399*

Offer Code Price Only \$59 + S&P Save \$340!

You must use the insider offer code to get our special price.

1-800-333-2045

Your Offer Code: KTR313-02 Please use this code when you order to receive your discount.



14101 Southcross Drive W., Dept. KTR313-02,
 Burnsville, Minnesota 55337 www.stauer.com

ACCREDITED BUSINESS Rating of A+ * Special price only for customers using the offer code versus the price on Stauer.com without your offer code.

11/5 carats of geniune tanzanite • Lab-created white DiamondAura accents • .925 sterling silver setting • Whole ring sizes 5-10

Stauer...Afford the Extraordinary.™

Steel Yourself

At \$59, this blade of legendary Damascus steel is a real steal

Damascus steel is the stuff of legend. Using a technique first mastered in the ancient city, swords made from Damascus steel were known to slice gun barrels in half and separate single strands of hair in two, even if the hair simply floated down onto the blade.

Now, you can be a part of the legend. The 7 ½" *August Knife* features a blade of modern Damascus steel, inspired by the production techniques and legends of history. Damascus steel blade knives can cost thousands. So, at **\$59**, the price itself is also legendary.

Once a lost art, we sought out a knifemaker who has resurrected the craftsmanship of Damascus steel to create the *August Knife*. The elusive, ancient

production technique mixes different steel alloys to form a super steel the outcome is a beautiful one-of-a-kind pattern of banding and mottling reminiscent of flowing water.



BONUS! Call today and you'll also receive this genuine leather sheath!

With the *August Knife* you're getting the best blade money can buy. What you won't get is the inflated price tag. We know a thing or two about the hunt like how to seek out and capture an outstanding, collector's-quality knife that won't cut into your bank account.

Limited availability. Only a handful of artisans make these blades, with each handcrafted knife taking months to perfect. We currently can get less than 1500 this year, so we can't promise they'll stick around for long— especially at this price. Call today! Your satisfaction is 100% guaranteed. If you don't feel like we cut you a fair deal, send it back within 30 days for a complete refund of the item price. But we believe once you wrap your fingers around the *August's* handle and experience the beauty of its Damascus steel blade, you'll be ready to carve out your own legend.

August Knife non offer code price \$149* Offer Code Price Only \$59 + S&P Save \$90

1-800-333-2045

Your Insider Offer Code: AGK165-01 You must use the insider offer code to get our special price.

Stauer® 14101 Southcross Drive W., Dept. AGK165-01 Burnsville, Minnesota 55337 www.stauer.com

*Discount is only for customers who use the offer code versus the listed original Stauer.com price.

Limited Collector's Edition

What customers are saying about Stauer knives...

Not shown actual size.

• 7 1/2" overall length • Genuine Damascus steel blade • Stainless steel guard • Leather handle • Includes genuine leather sheath

TAKE 60%

OFF INSTANTLY

When you use your

INSIDER OFFER CODE

Stauer...Afford the Extraordinary.™

Texas Parks & Wildlife	0.0.4	D D		5 8	6	9/1/201
(instrance)	D U 4		Pickhi	1000		5. Amusl Subscription Poter
Monthly with combined issues: in Jacoff shard AugSep	10					\$18.00
2 Ourselow taking roless of knews office of Publishing Bet workd 200 4200 Smith School Rd, Austin, TX 78744	144°, 1377, 30141	r, siav,	ana 2V	1.493		Canad Pascel Peter Kel
				Tologhoes (Wobbi arco coel) 650-583-4474		
Complete Mailing Address of Electropueters of General Equineous URLaw of	Publicar (Ad	1945533				
4200 Smith School Rd., Austin	TX 7	874	14			
E Full Nervices and Comparish Malling Addression of Shutkerson, Tables, and Ma				695		
Patrater (Neme entranglete metry adapat)						
Randy Brudnicki; 4200 Smith S	School	D.		lucti	in	TY 78744
	501100	10	., P			
						1/ 10/44
Edine discover and complete reading addressed						1X /0/44
	ol Rd	Au	stin			
Louie Bond; 4200 Smith Schoo	ol Rd.,	Au	stin			
Louie Bond; 4200 Smith School				n, TX	(7	78744
Louie Bond; 4200 Smith School				n, TX	(7	78744
Louie Bond; 4200 Smith School Stages 7 for (base of anythic same athen) Russell Roe; 4200 Smith School 1 date for the set of a set of a set of anythic set of a set of anythic set of a set of a set of a set of anythic set of a set of a set of anythic set of a set of a set of a set of anythic set of a set of a set of anythic set of a set of a set of a set of anythic set of a set of anythic set of a set of a set of a set of anythic set of a set	ol Rd.	, Aı	isti	n, TX n, TX	(7 X	78744 78744
Louie Bond; 4200 Smith School Magnet The Case of Annual Annual Russell Roe; 4200 Smith School Cherrichter Annual Annual Annual Annual Annual Cherrichter Annual Annual Annual Annual Annual Annual Annual Cherrichter Annual	ol Rd.	, Aı	isti	n, TX n, TX	(7 X	78744 78744
Louise Bond; 4200 Smith School biologis (start (take and anywhet biologi athwat Russell Roe; 4200 Smith School do Shart for a hand start of the function of a second start for second any adhered the function of a second start of the second any adhered the second start of the function of the second start of the second start of the second and start adhered to second start of the second start of the second start of the second start of the second start adhered to second start of the second start of the second start of the second start of the second start adhered to second start of the	Complete 1	, Au	isti	n, TX	(7	78744 78744 78744 (1999) (1999) (1999) 78 (1999) (1999) (1999) (1999) (1999) 78 (1999) (1999) (1999) (1999) (1999) (1999) (1999) (1999) (1999) (1999) 78 (1999) (19
Louie Bond; 4200 Smith School Magnet The family and annual many attack Russell Roe; 4200 Smith School 10 Anne family the Alast of the Alastacher on annual to extremation and annual the Alast of the Alastacher on the other the the annual and annual the Alastacher on the other annual to be annual the Alastacher of the Alastacher on the other annual to be and annual the Alastacher on the other annual to be and annual the Alastacher on the other annual to be and annual the Alastacher on the other annual the alastacher of the alastacher of the Alastacher on the other annual the alastacher of the alastacher of the Alastacher of of the alastacher of the Alastacher of the alastacher of the Alastacher of the alastacher of the alastacher of the Alastacher of the alastacher of the alastacher of the Alastacher of the alastacher of the alast	Complete 1	, Au	isti	n, TX	(7	78744 78744
Louise Bond; 4200 Smith School biologis (start (take and anywhet biologi athwat Russell Roe; 4200 Smith School do Shart for a hand start of the function of a second start for second any adhered the function of a second start of the second any adhered the second start of the function of the second start of the second start of the second and start adhered to second start of the second start of the second start of the second start of the second start adhered to second start of the second start of the second start of the second start of the second start adhered to second start of the	Complete 1	, Au	isti	n, TX	(7	78744 78744 78744 (1999) (1999) (1999) 78 (1999) (1999) (1999) (1999) (1999) 78 (1999) (1999) (1999) (1999) (1999) (1999) (1999) (1999) (1999) (1999) 78 (1999) (19
Louise Bond; 4200 Smith School biologis (start (take and anywhet biologi athwat Russell Roe; 4200 Smith School do Shart for a hand start of the function of a second start for second any adhered the function of a second start of the second any adhered the second start of the function of the second start of the second start of the second and start adhered to second start of the second start of the second start of the second start of the second start adhered to second start of the second start of the second start of the second start of the second start adhered to second start of the	Complete 1	, Au	isti	n, TX	(7	78744 78744 78744 (1999) (1999) (1999) 78 (1999) (1999) (1999) (1999) (1999) 78 (1999) (1999) (1999) (1999) (1999) (1999) (1999) (1999) (1999) (1999) 78 (1999) (19
Louise Bond; 4200 Smith School biologis (start (take and anywhet biologi athwat Russell Roe; 4200 Smith School do Shart for a hand start of the function of a second start for second any adhered the function of a second start of the second any adhered the second start of the function of the second start of the second start of the second and start adhered to second start of the second start of the second start of the second start of the second start adhered to second start of the second start of the second start of the second start of the second start adhered to second start of the	Complete 1	, Au	isti	n, TX	(7	78744 78744 78744 (1999) (1999) (1999) 78 (1999) (1999) (1999) (1999) (1999) 78 (1999) (1999) (1999) (1999) (1999) (1999) (1999) (1999) (1999) (1999) 78 (1999) (19
Louise Bond; 4200 Smith School biologis (start (take and anywhet biologi athwat Russell Roe; 4200 Smith School do Shart for a hand start of the function of a second start for second any adhered the function of a second start of the second any adhered the second start of the function of the second start of the second start of the second and start adhered to second start of the second start of the second start of the second start of the second start adhered to second start of the second start of the second start of the second start of the second start adhered to second start of the	Complete 1	, Au	isti	n, TX	(7	78744 78744 78744 (1999) (1999) (1999) 78 (1999) (1999) (1999) (1999) (1999) 78 (1999) (1999) (1999) (1999) (1999) (1999) (1999) (1999) (1999) (1999) 78 (1999) (19
Louise Bond; 4200 Smith School Staging: Tate Case of unquiet same attenue Russell Roe; 4200 Smith School Case of a stage of a stage of the stage of the stage of the stage of the stage of the stage of the stage attenues of the stage stage of the stage of the stage of the stage of the stage stage of of the stag	Complete 1	, Au	isti	n, TX	(7	78744 78744 78744 (1999) (1999) (1999) 78 (1999) (1999) (1999) (1999) (1999) 78 (1999) (1999) (1999) (1999) (1999) (1999) (1999) (1999) (1999) (1999) 78 (1999) (19
Louie Bond; 4200 Smith Schoo Margin 1997 film for an analysis many alterna Russell Roe; 4200 Smith Schoo Smith School Smith School Smith School Smith School Smith School Smith School Texas Parks & Wildlife Department 1999	col Rd.	, Au	usti in order in Sch	n, TX	(7 X	78744 78744 Intercently Detected on the dig or magnetic based of an end of the set of the set of the Australian of the set of the set Austrin, TX 7874
Louie Bond; 4200 Smith Schoo War and State and State and State Russell Roc; 4200 Smith Schoo State and State and State and State State and State and State and State and State Texas Parks & Widtle Department	ool Rd.	, Au	usti orani orani orani orani orani orani orani orani orani orani orani orani	n, TX	(7 X	78744 78744 Intercently Detected on the dig or magnetic based of an end of the set of the set of the Australian of the set of the set Austrin, TX 7874
Names) (1987 Internet Annuelle Insert Alfred Russell I Marie (2000) 1986 Thank and Part Alfred Alfred Alfred Alfred State Thank and Part Alfred Alfred Alfred Alfred State Alfred Alfred Alfred Alfred Alfred Alfred Alfred State Alfred Alfred Alfred Alfred Alfred Alfred Alfred State Alfred Alfred Alfred Alfred Alfred Alfred Alfred Alfred State Alfred Al	col Rd.	, Au	usti orani orani orani orani orani orani orani orani orani orani orani orani	n, TX	(7 X	78744 78744 Intercently Detected on the dig or magnetic based of an end of the set of the set of the Australian of the set of the set Austrin, TX 7874
Louie Bond; 4200 Smith Schoo War and State and State and State Russell Roc; 4200 Smith Schoo State and State and State and State State and State and State and State and State Texas Parks & Widtle Department	ool Rd.	, Au	usti orani orani orani orani orani orani orani orani orani orani orani orani	n, TX	(7 X	78744 78744 Intercently Detected on the dig or magnetic based of an end of the set of the set of the Australian of the set of the set Austrin, TX 7874
Louie Bond; 4200 Smith Schoo War and State and State and State Russell Roc; 4200 Smith Schoo State and State and State and State State and State and State and State and State Texas Parks & Widtle Department	ool Rd.	, Au	usti orani orani orani orani orani orani orani orani orani orani orani orani	n, TX	(7 X	78744 78744 Intercently Detected on the dig or magnetic based of an end of the set of the set of the Australian of the set of the set Austrin, TX 7874
Louie Bond; 4200 Smith Schoo War and State and State and State Russell Roc; 4200 Smith Schoo State and State and State and State State and State and State and State and State Texas Parks & Widtle Department	ool Rd.	, Au	usti orani orani orani orani orani orani orani orani orani orani orani orani	n, TX	(7 X	78744 78744 Intercently Detected on the dig or magnetic based of an end of the set of the set of the Australian of the set of the set Austrin, TX 7874
Louie Bond; 4200 Smith Schoo War and State and State and State Russell Roc; 4200 Smith Schoo State and State and State and State State and State and State and State and State Texas Parks & Widtle Department	ool Rd.	, Au	usti orani orani orani orani orani orani orani orani orani orani orani orani	n, TX	(7 X	78744 78744 Intercently Detected on the dig or magnetic based of an end of the set of the set of the Australian of the set of the set Austrin, TX 7874
Louie Bond; 4200 Smith Schoo War and a series and a series of the series	ool Rd.	, Au	usti orani orani orani orani orani orani orani orani orani orani orani orani	n, TX	(7 X	78744 78744 Intercently Detected on the dig or magnetic based of an end of the set of the set of the Australian of the set of the set Austrin, TX 7874

acetos Tite Texas Parks & Wildlife August/September 2017 - Kenae of Circulation Direct Average No. Copies Each lesue During No. Copies of Biogle Jacua Published Noniced In Editor Out 164257 168366 133608 136730 Institute take Colore In Male advice Sets Trengh Delay of Colores and Sense Verders Colores Sets and Other Fell Distribute Output (SPE) 1410 1037 Part Distribution by Other Classes of Mar Tsrough the UPP to a . East Class MarM 138140 134645 25162 25159 405 225 25387 25564 160032 163704 4225 4662 164257 168366 84.1% 84.4% orm copres, go to ten 10 ce esce 3. P - ---

 Eksterne Copy Ortsukton 		Average No. Copies Each issue During Preceding 12 Norths	No. Copies of Bingle Issue Published Nearest to Filing Date
n Paulthermachippes	•	180	263
5. Turnel Parel Frank Express (Lews Dec) + Frank Element Graphers (Lews 1964)	•	134825	138403
 Total Print Costationation (Later 196) - Parel Lieutonica Capiers (Later 194) 	•	160212	163967
s. Postone Peak disch Franck Electronic Copiers (14th cherted by 154 × 1579	•	84.4%	84.4%
I service that \$5% of all my distributed copies (electronic and print) are paid altor	es a nomina	in process.	
Transing that MBS of all may aluminated capars (theorem) and you'ld are published Transing the theorem of the transit of theorem of the transit of			ion of second



54 * TEXAS PARKS & WILDLIFE







At Kris Title Services, we specialize In motor vehicle and boat titles, lost title, out-of-state titles, registration, and mechanic liens





www.krismultiservices.com



GET YOUR FREE MOBILE HUNTING GUIDE!

Download our app and get our free Hunting Guide, plus great magazine content for iOS and Android. www.tpwmagazine.com/app

Field Guide for Buck Deer

12" X 15" Laminated poster details physical characteristics for Yearling, Immature, Mature and Post Mature Buck Deer



(830)257-4538 Wildlife Enterprises, Kerrville, TX

www.wildlifeenterprises.com

A TOAST TO THE UNTAMED SPIRIT OF THE LONE STAR STATE

TEXAS

TEXAS PRIDE HEIRLOOM **PORCELAIN®** STEIN

BOLDLY DESIGNED STEIN WITH TEXAS MOTIFS EVERYWHERE INCLUDING A 22K GOLD TEXAS **RIGHT ON THE FRONT**

INTRICATE, RAISED RELIEF TOOLED LEATHER DESIGN

CUSTOM, SCULPTED **TEXAS LONGHORN** HANDLE

1 A LONE STAR DESIGN RINGS THE BASE AND DECORATES THE THUMB REST

X ZINC ALLOY TOPPER WITH GOLDEN STARS AND THE TEXAS STATE SEAL

> Shown smaller than actual size of about 10 inches high

www.bradfordexchange.com/texasstein

DESIGN AS BOLD AS TEXAS.

This all-new Heirloom Porcelain® stein is a must-have for those whose love of Texas runs deep and proud. Hand-painted a deep bronze reminiscent of the setting western sun, the Texas Pride Stein features silvery, raised relief panels that follow in the long tradition of fine hand-tooled saddles. A 22K gold Texas state plaque adorns the front panel while a 22K gold steer and a "Texas Pride" banner adorn the back. Lone stars ring the base and a custom zinc alloy topper complete with the State Seal of Texas finishes the top. A sculpted Texas longhorn handle and a thumb rest emblazoned with yet another lone star rounds out this custom, 32-ounce edition.

BRADFORD EXCHANGE EXCLUSIVE... ORDER NOW!

Strong demand is expected for this limited edition, so act now to get yours in four installments of \$24.99 each, for a total of \$99.95*, backed by our 365-Day Satisfaction Guarantee. Send no money now. Mail the Reservation Application today!

*For information on sales tax you may owe to your state, go to bradfordexchange.com/use-tax



Reverse features a 22K gold steer on a silvery tooled background and a "Texas Pride" banner ©2017 BGE 01-20207-001-BIL

RESERVATION APPLICATION		SEND NO MONEY NOV		
-	тне			
	RD EX	KCHANGE or⊢		
9345 Milwaukee A	venue · N	iles, IL 60714-1393		
YES. Please reserve t Stein for me as describe Limit: one per order.	he Texas P d in this anr	ride Heirloom Porcelain® louncement. Please Respond Promptly		
Mrs. Mr. Ms.				
N	lame (Please Pr	int Clearly)		
Address				
City	State	Zip		
Email (optional)				

01-20207-001-E31793

"Plus a total of \$14.99 shipping and service; see bradfordexchange.com Limited-edition presentation restricted to 95 firing days. Please allow 4-8 weeks after initial payment for shipment. Sales subject to product availability and order acceptance.

S

L



HIKING ESSENTIALS

- HIKING BOOTS
 HYDRATION
- SUNSCREEN
- SUNGLASSES
- COMPASS
- WATERPROOF
 MAP
 - BUG SPRAY
 RAIN GEAR
 - CELLPHONE

PACK OR

WATER

BOTTLE

MULTITOOLSNACKS

IN CASE OF EMERGENCY

HEADLAMP OR
 FIRE STARTER
 FLASHLIGHT
 WARM
 MATCHES
 EMERGENCY
 FIRST AID
 BLANKET
 SUPPLIES

BONUS ITEMS

- TEXAS
 WILDLIFE ID
 BOOK
- HAMMOCK
 BINOCULARS
 CAMERA

WHERE TO GO

Colorado Bend Bend Pedernales Falls Johnson City Enchanted Rock Fredericksburg Davis Mountains Fort Davis Martin Dies Jr. Jasper Palo Duro Canyon Canyon **IN TEXAS,** getting outside for a day hike can transport you to a wide array of fantastic destinations: waterfalls, wetlands, canyons and mountains.

Hiking allows you to reconnect with nature and get a little exercise, too. It can make you happier and healthier, providing your body with active benefits and nourishing your imagination and your sense of adventure. Plus, it can be enjoyed by people of varying ages and abilities. Hiking can be as easy as strolling across a meadow or as difficult as climbing a mountain.

For me, there are few more rewarding activities than putting one foot in front of the other on an excursion into a Texas park.

Recently I ventured out on a hike through Pedernales Falls State Park. The river was flowing swiftly as I hopped from one boulder to the next, searching out wildlife and trying to find the best view of the falls. In one magical half-day journey I encountered ducks, horses, rabbits, catfish and even an armadillo. My day hike transformed my ordinary weekend at home into an unforgettable experience outside.

By Nicolette Ledbury

QUICK TIPS

DAYPACK FIT: Make sure your pack fits properly. Most outdoor stores will have experts to help you find the perfect pack for your body type and back size.

CHECK THE WEATHER: Hot or cold temperatures can greatly affect your hike. Keep an eye on the weather and prepare by bringing layered clothing, rain gear and extra water on days with extreme weather conditions.

START EARLY: The best time to spot wildlife is in the early morning and late evening. The cooler temperatures mean animals are more likely to move about freely along the trails.

BRING FRIENDS: Beginning a new hobby such as day hiking can be intimidating. Bring a friend or two along in case of emergency situations, and also for the fun of sharing outdoor experiences.

SHARE YOUR ITINERARY: Tell a friend or family member where you are going. Include what trails you'll hike, your companions' names and when you'll start and finish.

KNOW YOUR LIMITATIONS: Call ahead to review your itinerary with park staff to ensure your route is reasonable and clear of hazards. Consider your skill level and the difficulty of the terrain.



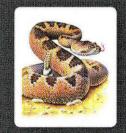
Show What BOOM STORE STO

Choose from 8 colorful images for your license plate











Only \$30 a year, with \$22 going to support conservation in Texas. Available for your car, truck, motorcycle, trailer or RV. Order online or at your local county tax office.

www.conservationplate.org

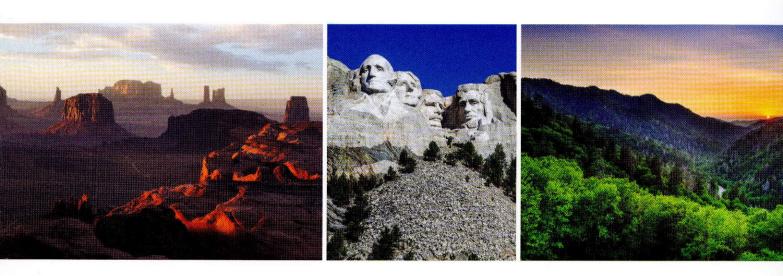


Life's better outside.

PARTING SHOT

Photographer Andrew McInnes went camping with his wife and friends at Garner State Park in the Hill Country over the Thanksgiving holidays one year. Early Thanksgiving morning, he ventured off with his camera and tripod in hand and was greeted with a splendid fog along the Frio River. As the sun rose, the fall foliage lit up as if on fire, McInnes said, and he happily captured several scenes juxtaposing the bright colors of the trees and the ethereal fog.

TOOLS: Canon EOS 30D camera, EF100-400mm f/4.5-5.6L IS USM lens, f/14 at 1/13th of a second, ISO 200.



Savings can take you to amazing sights.



geico.com | 1-877-434-2678 | Local Office

Some discounts, coverages, payment plans and features are not available in all states or all GEICO companies. GEICO is a registered service mark of Government Employees Insurance Company, Washington, D.C. 20076; a Berkshire Hathaway Inc. subsidiary. © 2017 GEICO

GEAR UP FOR GAME WARDENS

Texas Parks and Wildlife Foundation is grateful for the incredible response to Hurricane Harvey. Along with thousands of other first responders, more than 250 Texas Game Wardens and 90 State Park Police Officers rescued more than 10,000 people.

TPWF is proud to support Texas Game Wardens. Gear Up for Game Wardens is a new program that is raising private funds to ensure that our game wardens have access to specialized equipment beyond their standard issue gear.

Find out more at www.GearUpforGameWardens.org