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The Hawk Tower at Bentsen-Rio Grande Valley State Park offers a panoramic view of the tree canopy.

30

THE YEAR OF STATE PARKS: WORLD BIRDING CENTER

Birds, Birds and More Birds

Rio Grande Valley parks offer the ultimate birder's paradise.

by Melissa Gaskill

PLUS: Nine State Parks to View Wildlife, **Page 34**

PHOTO © LARRY DITTO

ON THE COVER: *A green jay comes in for a landing on a huisachillo limb near Bentsen-Rio Grande Valley State Park. Photo © Larry Ditto*

BACK COVER: *The South Padre Island Birding and Nature Center protects coastal habitat in the World Birding Center network. Photo © Larry Ditto*

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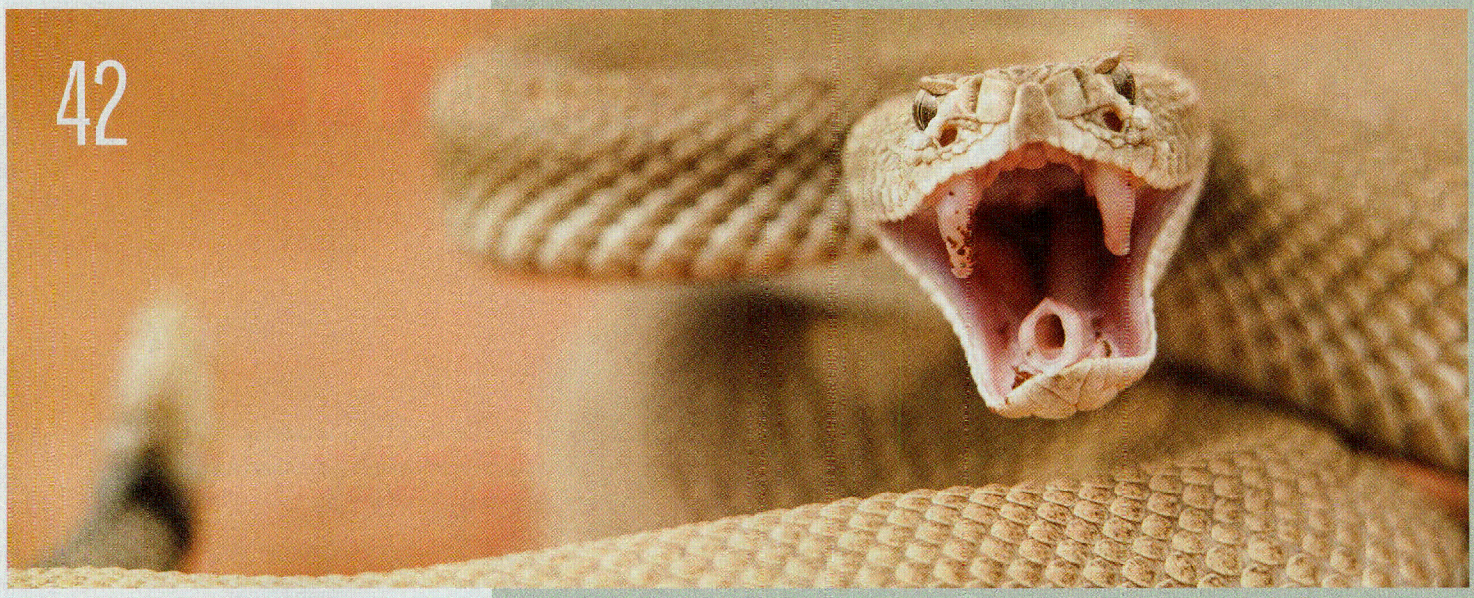

PHOTO © WYMAN MEINZER

↑ *PERHAPS THE MOST UNUSUAL [PHOTOGRAPHIC] SUBJECTS ARE FOUND WITHIN THE DIVERSE MENAGERIE OF OUR NATURAL FAUNA — SPECIFICALLY, GENETIC ANOMALIES OF COLORATION THAT OCCUR PERIODICALLY IN ALL SPECIES.*

—WYMAN MEINZER

PHOTO © CARL J. FRANKLIN

PHOTO BY EARL NOTTINGHAM / TPWD

PHOTO BY EARL NOTTINGHAM / TPWD

ILLUSTRATION © JESSICA BLANK

TEXAS parks & wildlife

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FROM THE EDITOR

"WE KNOW WHAT WE ARE but know not what we may be." That Will Shakespeare always knew how to say it best. Do you ever stop to think about how you became who you are today, and who helped you along the way?

We talk about mentoring a lot at TPWD. After all, if you're 8 years old, and you want to fish, how do we get you to the water with a pole in your hand? It takes an adult to show you how to dig worms, how to bait your hook, how not to wind up stuck in the tangled branches. It's easy to see the difference a mentor makes in helping a child explore a passion.

Take Jesse Huth, for example. He was encouraged from an early age to pursue his passions, learning about chickens from my husband and others, soon starting his own fresh egg business in town. Jesse had a neighbor who took him under her "wing" and helped him learn to identify wild birds.

"When I was 5 years old, I took a good look at a wild bird and thought, 'I like this thing and I want to learn more about it!'" Jesse recalls. "I then met [TPWD ornithologist] Cliff Shackelford and knew I wanted to be him when I grew up, which led to my absolute obsession."

Jesse took Cliff's Audubon birding course as a young teen. Cliff showed me a photo of young Jesse on a class trip to the bird collection at Texas A&M University. Jesse, sporting his trademark mullet, is staring raptly at a hawk. He's wearing a homemade T-shirt that sports a hand-drawn illustration below these scrawled words: "I am a birder."

A decade later, Jesse is now pursuing a doctorate in poultry science, has a poultry consulting company, conducts land management surveys, founded a Fancy Feathers 4-H program and leads birding tours.

You'll discover on Page 36 that Cliff has connected with a new young enthusiast to mentor these days, causing him to reflect on how his parents found ways to encourage him. As we celebrate our parents this month and next (Mother's Day and Father's Day), it's a great time to look around you and find a youngster — in your family, in your neighborhood, from your church or school — to include on a camping trip or hunting foray. Maybe he or she would love to hear your fishing stories or learn how to bait a hook.

Perhaps the best way to say thank you to our own parents is simply to pay it forward. Take some time this spring and summer to nurture young minds in the beautiful outdoors, where life truly is better.

Louie Bond

Louie Bond, Editor

MEETING THE TEXAS STATE PHOTOGRAPHER

I WAS JUST A STARRY-EYED KID, not quite even a teenager, when I first met the man. It was on a ranch up in the Rolling Plains right outside of the little town of Benjamin. We had gone up to see some rancher friends of my parents, who had invited us up for a visit, and a quail hunt to boot. I was beyond excited to be there.

The gentleman showed up before light one morning in his trademark black felt hat, a worn duster, knee-high riding boots and big sweeping mustache. He had a bed full of dogs in the back of a weathered pickup truck that by the looks of things had clawed its way around the rough breaks of many a ranch in that part of the world.

To add to his mystique, our friends had told me that the man lived in the old jail in Benjamin and that he supported himself for the longest time living in an old dugout line camp on one of the big ranches trapping bobcats and coyotes. He apparently had put himself through college back when furbearer prices could earn a man a decent wage.

We hunted with him over a glorious few days and had a big time chasing blue and bobwhite quail, as well as ducks and geese. He also introduced me to the ways of calling coyotes. I had no idea a person could make so many distressed rabbit sounds of varying pitch and frequency. I was hooked the first time a big bushy coyote decked out in his winter best came barreling up out of a draw, skidding to a stop a mere 10 yards or so away from us, expecting to find breakfast, but alas and too late, finding us instead.

The man seemed to know everything there was to know about hunting game in the Rolling Plains. But that wasn't all. There wasn't a plant or animal, big or small, that he couldn't identify. He'd then regale us with some engaging story about its value and place on the landscape. He seemed to wax particularly enthusiastically about roadrunners, telling story after story about colorful ones he had followed around as a kid and later on as an adult. On top of all that, he had some of the most extraordinary wildlife pictures I had ever seen.

The man was simply an artesian well of information, an outdoorsman's outdoorsman. It wasn't until 10 or so years later that I learned just how talented that man was and just how fortunate I had been to traipse around with him for a few days out in nature.

That man was Wyman Meinzer.

Wyman, as you may know, is the official Texas State Photographer, an honor rightfully bestowed upon him by an appreciative state Legislature. His ability to capture the majesty of Texas' stars and skies, pastures and prairies, woods and waters, birds and game, wide-open spaces and vast places is simply legendary. Two of his photo books, *Between Heaven and Texas* and *The Roadrunner*, occupy prominent places in my office. When it comes to the lens and our wild things and wild places, Wyman Meinzer is simply as good as it gets.

Wyman is no stranger to this magazine, and we have enjoyed a long and fruitful relationship with him over the years, happily featuring his immense artistry. This month, he shares with us a beautiful photo essay of some of the rarest of rare color anomalies he has documented in wildlife. It's a real feast of nature for the eyes.

Speaking of nature and such, this month's issue focuses on the state's rich bird life and birding traditions. Spring is a great time to hit the proverbial trail across Texas to enjoy what many people believe to be the best birding in the United States. And, as Naima Montacer writes so compellingly about her sojourn out into wilds around Dallas, you don't have to venture far from our urban centers to do it.

Wherever you are, whatever you are doing this spring, I hope you'll find some time to heed our call of "Life's better outside."

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

Carter Smith
EXECUTIVE DIRECTOR

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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.

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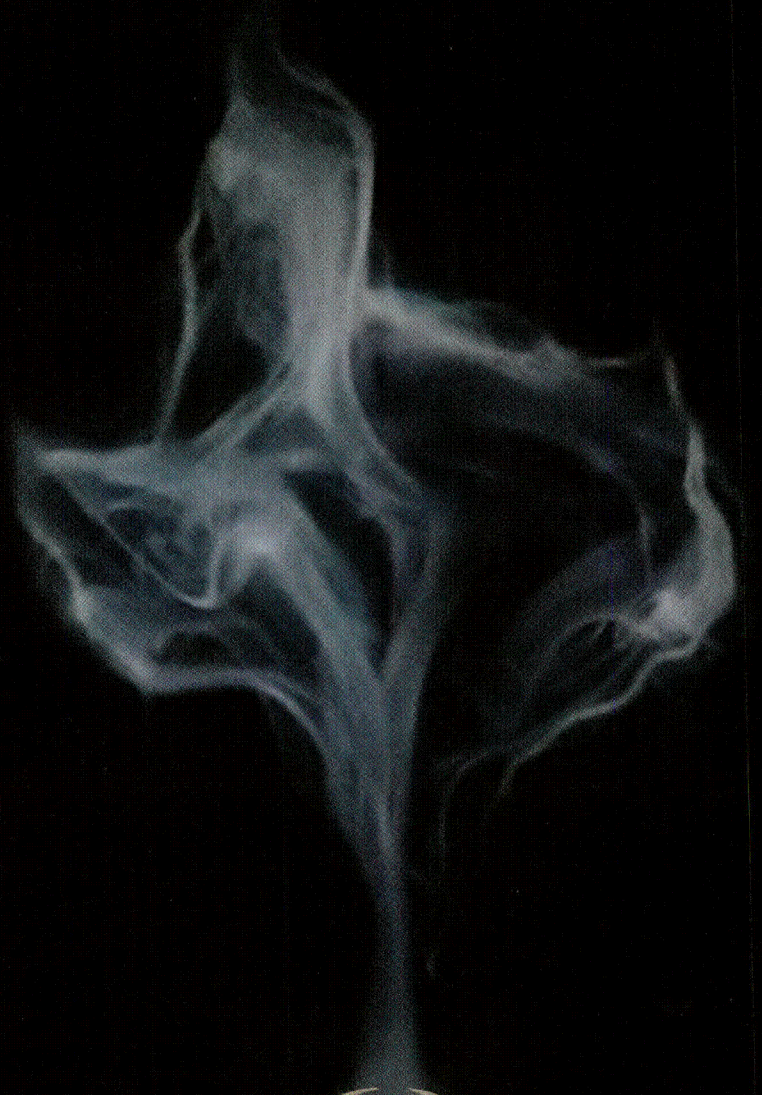

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HISTORICAL TREASURES AT WASHINGTON-ON-THE-BRAZOS

Really enjoyed your article on Washington-on-the-Brazos State Historic Site ("Where Texas Was Born," March 2016).

The museum and the working farm are real Texas treasures, and now the visitors center has a book on the Old 300 settlers to accompany the story of the place. Our state parks are unique Texas gems that share a wonderful story. Thank you for the emphasis.

Paul N. Spellman
Richmond

ENTICING VISTAS

Loved the new issue (January/February 2016) featuring state parks with a view.

Congrats on a colorful, informative issue with beautiful photography. Now, some new park visits are in my future.

John Jennings
Fort Davis

MAD ABOUT MONARCHS

I have been a monarch enthusiast since I was age 9 (I'm now 84), and when I received the August 1976 issue of *National Geographic* I told my wife that we were going to Mexico. It was some years later that I made my first trip, and I have now been three times.

On my first two trips it was extremely pristine — guides were provided who made sure you did not wander from the trail or disturb the monarchs in any fashion, a part of their cultural legend. On my last trip, things changed dramatically — commercialism was present, and as Catalina Trail ("Maiden of the Monarchs," March 2016) had feared, "Now there will be hordes of people here and they'll destroy everything."

How prophetic that statement was. On my last trip, it was crowded, people were stepping on grounded monarchs, and kids were swatting them as they flew past. Now the state of Michoacán has become a drug capital with the cartels and vigilantes fighting over rights to drugs and illegal logging. My only hope is that the monarchs will find another mountain for their winter sanctuary.

Thank you, Ms. Trail, for identifying yourself and for telling your story.

Donn Byrne
Tyler

VIEWS FROM THE PLAINS

Thank you, thank you, thank you for the wonderful article by Russell Graves ("The Caprock Escarpment," January/February 2016). We, too, are from up on the plains and have followed Russell's work since discovering his work as a teacher at Childress. It is so nice to see regular articles concerning our area up here. The other magazines about Texas seem to forget we are up here.

We are longtime subscribers and love your magazine as well as your public television show, which both reflect awesome care in their production.

A. Tudor
Lubbock

CHANGES AT THE MAGAZINE

First, let me say thank you for the decades of hard work and beautiful magazines. I have kept every one for the past 25 years and read them cover to cover. Candidly, though, the new logo creates a poor first impression compared to the previous big, bold and colorful one. Also, the font in some of the articles is so small that it is difficult to read. Please consider tweaking these things so the next 25 years will be as good as the last.

Danny White
Austin

New State Park App Puts Information at Your Fingertips

GETTING AWAY FROM IT ALL at a state park has never been easier. The new Texas State Parks Official Guide mobile app (download it on the Apple App Store or Google Play) helps you find your perfect park based on preferred activities, available camping options and trail information. It's fast, free and easy!

"Mobile devices are very much part of our lives these days, and with this app, we can help enhance the park experience in more interactive ways," says Brent Leisure, Texas state parks director. "It brings the outdoor experience into the 21st century by making valuable state park information more accessible than ever before in a very user-friendly format."

The app keeps users up-to-date on park closures caused by weather or other events. Visitors can also create a custom list of their favorite parks.

For more information about the new app, visit *www.TexasStateParks.org/app.*

APP FEATURES:

- Facilities and amenities for all 95 Texas state parks
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- Photos and videos of parks

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.

Learn about the four quail species that call Texas home. **Watch the week of May 15-21.**

MAY 1–7:
Shotgun tips; desert bighorn history; paddling near Dallas; restoring the forest; Caprock prairie dogs.

MAY 8–14: Historical rock art; protecting the night sky; Canadian River ranch scenes; Carpe Diem Ranch.

MAY 15–21:
Balmorhea fun; quail update; early RV camping; South Texas wildlife.

MAY 22–28:
The cup crusaders; fighting wildfires; rabbit food; looking back at Engeling WMA.

MAY 29–JUNE 4:
Finding refuge in hunting; fa conry; East Texas pines; Lavaca Rio Ranch.

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**

Snake Days Draws Herp Enthusiasts

PHOTO BY CULLEN HANKS / TPWD

WEST TEXAS is one of the best places in country to find herps, a shorthand term for reptiles and amphibians. Each year, herping enthusiasts gather to learn about and celebrate the incredible diversity of these creatures that grace our desert and mountain habitats at the Snake Days Herpathon, to be held in Sanderson on June 3-5 this year.

Attendees will participate in presentations on herps, a raffle and silent auction with herping gear, a swap meet, vendor booths, educational displays and social time with other herping enthusiasts.

There's a dinner with live music Saturday night, but it ends early so herpers can go out looking for snakes after the sun goes down. Snake Days proceeds support reptile and amphibian projects at TPWD.

The Herps of Texas project organizes a competition during the event, with prizes to see who can find and photograph the highest number of species. It takes both skill and luck to win this competition. Another competition, the Clean the Highways project, awards prizes to the top collectors of trash. Other fun includes a West Texas photography contest and a scavenger hunt for fake snakes.

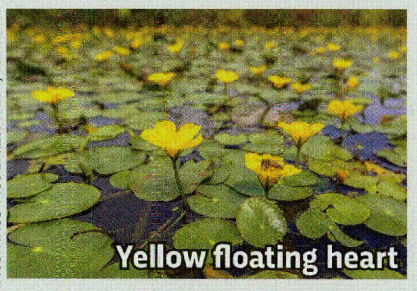
For more information, go to *www.snakedays.com*. To follow the competition, keep an eye on the leaderboard at *www.inaturalist.org/projects/snake-days-leaderboard*.

— Cullen Hanks

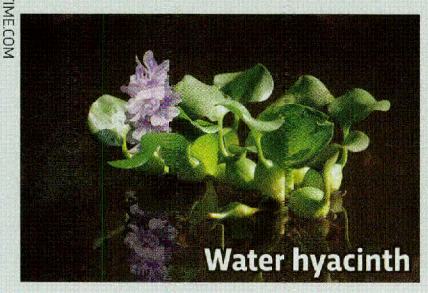
War on Invasives Ramps Up


Zebra mussels


Salt cedar


Yellow floating heart


Giant reed


Water hyacinth

PHOTOS FROM TOP © VITER8/DREAMSTIME.COM; MONICA MCGARRITY/TPWD; RUDMER ZWERVER/DREAMSTIME.COM; SONJA SOMMERFELD/TPWD; ARIEVDWOLDE/DREAMSTIME.COM

THANKS TO record funding approved by the Texas Legislature in 2015, the Texas Parks and Wildlife Department is ramping up an unprecedented, two-year effort to control and stop the spread of aquatic invasive plants and creatures. These invasives pose a seemingly ever-increasing hydra of threats, with giant salvinia and zebra mussels covering Texas lakes, giant reed and salt cedar smothering rivers and streams, and exotic fish competing with Texas natives and altering natural ecosystems.

"It's a huge challenge to address these problems all across our state, and no one organization can do it alone — the scale of the problem is just staggering," says Tim Birdsong, who leads aquatic resource conservation programs in TPWD's Inland Fisheries Division. "Now we have increased resources to expand control efforts and conduct research to fine-tune solutions. We urgently need the help of boaters, riverside landowners, river authorities, water management districts and other partners to be successful."

Texas Parks & Wildlife magazine joins this effort by starting a new monthly series profiling invasive species. Learn more about giant salvinia on Page 14 and watch for new topics in upcoming months. For more information on invasives, visit *texasinvasives.org*.

PHOTO BY LARRY D. HODGE / TPWD

PHOTO BY KEVIN STOREY / TPWD

PHOTO BY LARRY D. HODGE / TPWD

FORCEFUL FERN

Texas fights giant salvinia with floating booms, herbicides and special weevils.

BY DYANNE FRY CORTEZ

IN NOVEMBER 2015, fisheries biologists at the Texas Parks and Wildlife Department received a most unwelcome piece of news. Giant salvinia had been spotted in Lake Fork, a popular bass-fishing lake in East Texas.

The invasive South American fern has been a known threat in East Texas; TPWD and its partners have spent a decade fighting infestations on Caddo Lake and Toledo Bend Reservoir. They know it's important to act quickly because giant salvinia can spread with devastating speed. Rushing to investigate, biologist Kevin Storey and his crew found 3.25 acres of giant salvinia at the back of Chaney Branch, west of the Lake Fork dam.

The community sprang into action. The Sabine River Authority closed

PHOTO BY LARRY D. HODGE / TPWD

private boat ramps at Chaney Point South and Secret Haven. More than 1,000 feet of floating boom, the type that's used to contain oil spills, was placed in the water in an attempt to confine the infestation. TPWD staff applied herbicides in November and February. As of this spring, crews hadn't found the noxious plant growing anywhere else in the reservoir. But this recent invasion of a favorite fishing lake serves to remind us all that *Salvinia molesta* is a threat to reckon with.

The rootless fern floats on the water, forming dense mats of vegetation that hinder access to boat ramps and block the sunlight that drives the underwater food chain. It reproduces by budding. One broken stem on a boat trailer can start a new population. Under favorable conditions, a colony can double in size every two weeks.

Floating booms, judicious use of herbicides and physical removal of small stands have helped to control giant salvinia in some waters. Biological controls offer some hope for the future. A tiny salvinia weevil (*Cyrtobagous salviniae*) keeps the plant from overpopulating its native range in South America. TPWD and other organizations have learned how to rear this insect for stocking in Texas waters. Still, the only sure way to rid a lake of giant salvinia is to make sure it doesn't get there in the first place. Here are two things every citizen can do to help:

Don't spread it! "Clean, Drain and Dry" your boat and trailer to avoid carrying aquatic invasives to new waters.

Report it! If you see giant salvinia in an area not already known to be infested, call the nearest TPWD fisheries management office or use the online report form at *texasinvasives.org* ★

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SUN WORSHIPPER

Studies are underway to learn more about the range of the rare reticulate collared lizard.

BY LOU HAMBY AND RANDY CORDERO

PHOTO © SETH PATTERSON

WE ARE ALL FAMILIAR with the beloved Texas horned lizard, but one of the best-kept secrets of Texas nature has to be the rare, remarkable reticulate collared lizard.

The reticulate collared lizard, so named for its pattern of "net-like" scales, generally inhabits South Texas' thorn-scrub vegetation and is frequently found on a terrain of shallow gravel, caliche or sandy soils. It often frequents scattered flat rocks below escarpments and isolated rock outcrops among scattered clumps of prickly-pear cactus and mesquite trees. As a ground-type lizard, it commonly ranges into mesquite flats far from rocky habitat.

Adult reticulate collared lizards can grow from 14 to 17 inches long. They are sun worshippers, not usually active until temperatures reach 86 degrees. They are extremely wary of people and can usually see us before we see them. They seem to be attracted to caliche roads and caliche areas on ranch properties, so pay close attention to the sides of the road, up on the berm and along the plant line. When Texas turns up the heat, these ground-dwelling lizards find cover in bushes and low-hanging branches up to two or three feet off the ground.

When reticulate collared lizards are frightened or approached by a perceived enemy, they can run at very high rates of speed. Once they take off, they raise themselves off the ground and run on their hind legs, using their tails for balance. When approached, they sometimes freeze in place, relying on their color pattern for camouflage.

Males can have exceptional coloration during breeding season, displaying gold and yellow on their head and arms. Young males retain a darkened throat patch.

These lizards consume a variety of foods. Because of their size and speed, they are able to consume smaller lizards such as Texas whiptail lizards, small snakes, mice, grasshoppers, moths and butterflies. They can jump up to 18 inches high to capture a butterfly. They also snack on ripe cactus tunas that have fallen to the ground. An insect called a Texas cactus bug (*Chelinidea vittiger*) lives and feeds on cactus tunas, particularly at the end of the summer before the lizards hibernate, and they provide the lizards with a great opportunity to fatten up at the end of the season.

Females deposit eight to 11 eggs in a suitable environment, usually under a log, pack rat nest or rocks,

COMMON NAME

Reticulate collared lizard

SCIENTIFIC NAME

Crotaphytus reticulatus

HABITAT

South Texas escarpments and rock outcrops among clumps of prickly-pear and mesquite

DIET

Smaller lizards, small snakes, mice, insects and occasionally plants

DID YOU KNOW?

When the lizard is chilled, the net-like pattern becomes almost indistinguishable.

---

or in a safe hole. Once the female lays her eggs, she leaves them. When the babies hatch, they are independent from mom. Texas' fierce roadrunners are always on the lookout for these little newborns, which stay close to cover and are extremely wary of even the smallest movements.

After hatching, the new lizards often gather in a loose-knit community for a short time. In one instance, we found eight or nine neonate lizards within a 50-yard area. This was the only time we observed reticulates in close proximity to one another. Adults are otherwise solitary and territorial.

Researchers and nature lovers must obtain a special permit to study these threatened lizards. New research is underway on both the reticulate and eastern collared lizard to document new areas of distribution, among other things.

If you own ranch property in Maverick County or Kinney County and see or photograph this lizard, please enter your observation on the Herps of Texas project on *www.inaturalist.org* or contact state herpetologist Andy Gluesenkamp at *andy.gluesenkamp@tpwd.texas.gov* to help document the lizard's northernmost range. ✭

PHOTO © JOSEPH MARCUS/LADY BIRD JOHNSON WILDFLOWER CENTER

TWISTER

Twistleaf yucca cleverly twirls up rain-catching leaves.

BY DYANNE FRY CORTEZ

TRAVELING THROUGH Central Texas in May, I'm often enchanted by the graceful white blooms of twistleaf yucca.

Like me, *Yucca rupicola* is a Hill Country native. Several types of yucca grow in my part of the state, but this species is found nowhere else. It's endemic to the Edwards Plateau, clinging to rocky ridges, dotting grasslands and pastures, and nestling in the partial shade of open woods.

Twistleaf yucca is easily identified by the twisting of its long, narrow, bright-green leaves. Leaf edges are lined with tiny yellow (to light brown) saw teeth, with a sharp spine at the tip of the leaf. The spiral leaf cluster, called a rosette, hugs the ground, measuring a foot or two across. New leaves emerge at the center, straight at first but twisting as they age. Botanists suspect it's an adaptation to collect rainwater and funnel it to the growing center of the plant.

Y. rupicola is typically seen scattered across a landscape, appearing as a solitary plant or in small, open colonies. It grows in community with other native shrubs, grasses and trees, mixed into a palette of browns and muted greens. When the flowers open in late spring, however, this plant stands out.

"Lantern-like" is how Craig Hensley describes them. Hensley is an interpreter at Guadalupe River State Park, which has a nice population of twistleaf yucca outside its Discovery Center. A plant produces a single bloom stalk, 2 to 5 feet tall. The cream-colored flowers, sometimes tinged with palest green, dangle from a loosely branched panicle at the top.

COMMON NAME

Twistleaf yucca, twisted-leaf yucca, Texas yucca

SCIENTIFIC NAME

Yucca rupicola

SIZE

Foliage grows up to 2 feet tall; bloom stalks rise up to 5 feet.

DID YOU KNOW?

Rupicola means "lover of rock."

Individual blossoms, viewed at close range, are around 2 inches long with six tepals (three white petals and three white sepals) and six stamens surrounding a central pistil. The reproductive organs are arranged in such a way that the plant can't fertilize itself. All yuccas depend on certain species of yucca moths to carry pollen from one blossom to the next. The moths, in turn, rely on yucca flowers to provide the nursery for their offspring. When that mutual-benefit arrangement proceeds as planned, twistleaf yucca will produce small black seeds in a woody capsule. When it doesn't, the plant can and does reproduce by vegetative means. The short stem may branch just under the soil surface, sending up shoots that develop into new leaf clusters.

Deer love to nibble on the fresh flowers. They usually don't bother the well-armed leaves, but it's easy enough to step around the spines and reach the blooms, which tend to be just the right height for grazing. Humans can eat yucca flowers, too.

"I can't describe the taste, but it is certainly unique," says Hensley.

Other good places to see twistleaf yucca include the trails at Hill Country State Natural Area, the prairies at LBJ State Park or almost any roadside in the Edwards Plateau region. They live here year-round, but the best time to go scouting is mid- to late May. When you round a bend and find one in bloom, it's always a nice surprise. ✶

PHOTO BY CHASE FOUNTAIN / TPWD

THINK SHALLOW

Use of selective focus brings special attention to the subject of a photograph.

BY EARL NOTTINGHAM

TRADITIONALLY, ONE OF THE HALLMARKS of a successful outdoor photograph is the attention paid to rendering a scene's objects in tack-sharp focus in the foreground, middle ground and background. This style adds to the perceived realism and sense of place of most scenes and is what you typically find gracing calendars and posters.

Successfully getting a wide range of objects in focus relies on a wide depth of field, which ensures that objects from very close up to very far away will be sharp. A wide depth of field is obtained by using a very small lens opening (called aperture or f/stop) such as f/16 or f/22, which can be set either manually or with several of the "Auto" functions of many point-and-shoot cameras.

However, one of the more underutilized and creative approaches to outdoor photography — which extends to landscape, nature, wildlife and even portraiture — is the exact opposite of the wide depth of field technique. It is the use of selective focus in the photograph.

Unlike a wide depth of field, selective focus is totally dependent

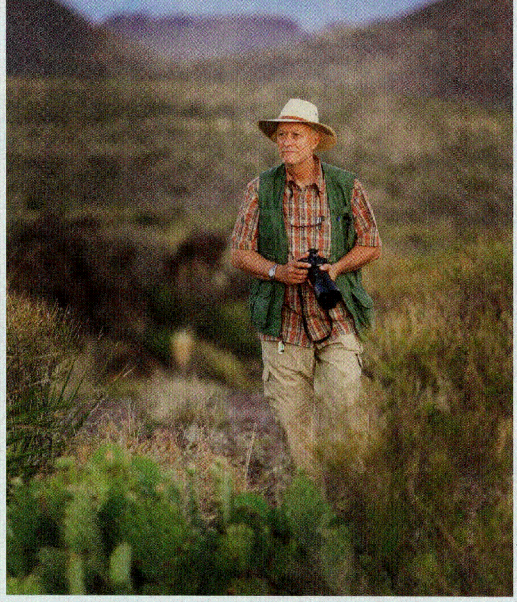


PHOTO BY EARL NOTTINGHAM / TPWD

Left: *Selective focus allows the photographer to isolate a few flowers in sharp focus while rendering those in the foreground and background in softer focus, thus adding an artistic quality.*

Right: *A shallow depth of field can be useful in portraits by separating a subject from busy foregrounds and backgrounds.*

on a very shallow depth of field using a lens's widest available aperture.

Isolating a subject in an image by keeping it sharp while placing other distracting objects out of focus is one way to grab the viewer's eye and call attention to important and nuanced details of that subject. Selective focus photographs can let us see ordinary objects in an extraordinary way and can add variety to any personal photo collection.

Be forewarned that a shallow depth of field, especially on a close-up/macro shot with a wide-open aperture, is a slippery slope requiring extra care to ensure that enough of the main subject is in focus considering the extremely limited focus range.

Without getting into the relationship between aperture, shutter speed and ISO (and their combined effect on the overall exposure of a photograph), suffice it to say that anytime we either manually or automatically change the aperture for creative purposes, a corresponding change must be made in the shutter speed (or ISO) to give us the same equivalent exposure. This generally means that when we select a wide aperture for a shallow depth of field, more light is entering the lens, and we must compensate for that by using a faster shutter speed. Luckily for those who are not into using manual camera settings, automatic settings can take care of this.

Here are some techniques you can use to get the best selective focus image:

Aperture priority: This automatic setting on most cameras enables you to choose the aperture you want to shoot at and then calculates the appropriate shutter speed. Go ahead and select the widest aperture your particular lens will open up to. Typically, non-zoom lenses will have wider available apertures such as f/1.8 to f/2.8, which are ideal. Most lenses, by design, have a "sweet spot" and will perform better when closed down slightly from their widest opening.

Portrait icon: Simpler cameras employ a "Portrait" icon with a face on the command dial, which, in essence, tells the camera that you are shooting portraits of people and would like everything, except the subject, slightly out of focus so as not to distract. It selects a wider aperture to accomplish this.

Longer focal length: A lens of a shorter focal length will create greater depth of field than longer focal lengths. For instance, a 28mm lens has more depth of field than a 105mm lens when shot at the same distance from the subject. As a result, longer lenses typically work better for selective focus shots. The longer focal length will further isolate your subject by narrowing the angle of the lens's coverage. One of my favorite lenses for selective focus shots is a 70-200 zoom shot at f/2.8.

Subject positioning: Moving a subject away from a background or foreground allows more distance for focus to fall off and helps control those distracting backgrounds. ✯

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*.

WHAT'S THAT BIRD?

Field guides and apps enrich any birder's outing, no matter the skill level.

BY JULIA GREGORY AND KIKI CORRY

PHOTO © SETH PATTERSON

BIRDING'S A BLAST, but it can be a little frustrating to see a lovely bird and not be able to identify it. Luckily, that's a fixable problem — just buy a field guide or download an app, right? Wait a minute, there are so many to choose from. Help?

WHAT IS THE BEST GUIDE?

The easy answer: The best guide is the one that works for you. Whether on printed page or digital screen, guides that help us narrow down likely birds by range, include bird calls and compare similar birds are the most helpful. Even expert birders rely on these fine comparisons, especially as they complete their own "life list" of birds they've seen.

GETTING FAMILIAR

Guides vary a bit. They all contain similar information, but organization is a key element for ease of use. Flip through the book (or app) quickly. The information you see might contain lots of birds that aren't even in your area. That can prove unnecessarily confusing, especially for beginners. Perhaps there's a regional guide that's more pertinent for you.

Take a close look at imagery. Drawings or photographs need to be clear; coloration really aids in faster identification. Males and females, juveniles and adults, breeding or normal plumage — all these factors can dramatically change a bird's looks. Does your guide provide these images as well?

Familiarize yourself with habitat/migration maps and diagrams, as well as how species are organized into chapters. Don't try to memorize it, just remember where to find it. If there is a "how to use this book" section, take a moment to read it.

START WITH WHAT YOU KNOW

Look up a bird you can identify already by using the index. Find the picture as well as the description and range map. Is everything clustered together, or did you have to find bits and pieces here and there?

Next, check out the birds you regularly see but can't identify by name. Notice their silhouettes, colors, body shapes and feather patterns. Compare sizes and take

note of behaviors; pay attention to very specific details of plumage called field marks. Now look up those local birds in your guide. What bird features were most helpful to identify the birds?

You can use your guide as a study tool when you're back home relaxing. Flip through your guide or app and look for birds you think you saw. Look at the pictures, check the range maps, look for cues on behavior and calls, and read the appendices. If you are not familiar with bird anatomy, study the diagrams and learn the terms. Gradually you will build your vocabulary and train your eye to pick out and remember the pertinent details.

SHARPEN YOUR OBSERVATIONS

Study all the birds you observe, guide or no guide. The sooner you get to your bird guide, the easier it will be to remember all the details. You may find yourself carrying your guide everywhere now — what a fun way to learn more!

Every time you turn to your guide or app, you learn more about using it. The more often you go from bird to guide and from guide to bird, the better and faster you will get. ✭

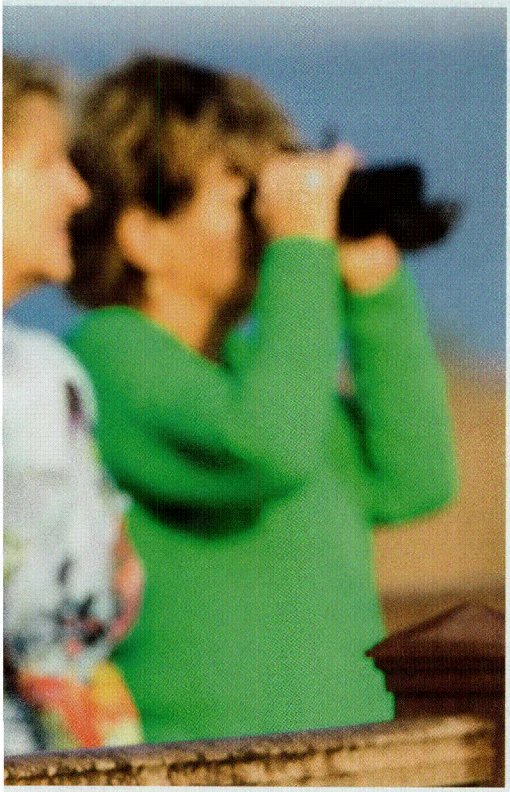


PHOTO © LARRY DITTO

WILD ABOUT BIG D

BY NAIMA J. MONTACER

You don't have to travel far from downtown to find nature experiences in Dallas.

AUSTIN
3 hours

BROWNSVILLE
7.5 hours

EL PASO
8.5 hours

HOUSTON
3.25 hours

SAN ANTONIO
4 hours

LUBBOCK
4.75 hours

I sometimes chat with friends from across the country who scoff at my suggestion that an outdoor lover can enjoy a visit to a big city like Dallas. It's as if they've lost their sense of adventure. There are natural treasures to uncover and explore in every city, and Dallas offers a tantalizing combination of outdoor adventure and big city amenities (translation: eating great food).

Our first foray into urban recreation was paddling whitewater kayaks on the Trinity River, a mere stone's throw from downtown. The skyline provided a beautiful backdrop for our kayak adventure. My fiancé, David, and I met the team from Kayak Instruction Inc. at the head of the Santa Fe Trail, a paved pathway along the Trinity south of downtown. They hopped out of their trucks loaded down with gear and immediately started getting us familiar with the area. Dave Holl told us about the history of the Dallas Wave, the $4 million whitewater park that opened in 2011 and was created by excavating and walling a segment of the river. We happened to come on a perfect water day, with just enough flow (425 cubic feet per second) to give us some fun but not dump this beginner overboard, or so I hoped.

We spent some time on the river acclimating to our tippy kayaks by practicing strokes, tossing a ball, looking for wildlife and then executing the dreaded "wet exit" test. Before we entered the whitewater

park, David and I had to demonstrate the ability to exit our kayaks safely. I giggled nervously, held my nose and tilted my kayak over, dumping myself into the cold water. I swam toward another kayak to be mock-rescued, proving I was ready for the rapids. We spent the afternoon playing in the two main rapids and learning more techniques, such as "eddying up," a move kayakers use to paddle out of the rapid and rest in the calm water that forms right next to the strong flow. Happily, no more wet exits were needed.

By the time we reached our campsite Friday night at Cedar Hill State Park, southwest of Dallas, it was dark and cold. David started the fire and got a tasty grilled dinner ready while I made camp. After hearing from the park rangers that ants were on the prowl, we decided against setting up a tent and resorted to our normal camping spot, the back of the truck. Bedded down with every blanket we own on top of our sleeping pads, we turned the truck bed into a dreamy under-the-stars resort. This Friday just happened to be the first frost of the year, so I spread a rain tarp over us to catch the frost. Seemed smart, but we learned a valuable lesson about water vapor and fabric. Water vapor released from your body while sleeping usually exits your sleeping bag, but ours was trapped under that nonbreathable tarp, resulting in unpleasant wetness. We'll know better next time.

Damp but excited about our Saturday adventures, we rose early, stopped for a quick coffee and headed into South Dallas, about 30 minutes away. We arrived at Texas Horse Park at the Trinity with enough time to check out the new Equest facilities and wander around the woods looking for wildlife. In its state-of-the-art barn and arena facilities, Equest provides therapeutic horsemanship activities for children and adults with disabilities. We watched riding lessons, stalked some waterfowl too far away to identify, introduced ourselves to the resident farm pig and gave the mini-horses some love as we waited for our trail guide from River Ranch, the other resident organization at the park.

When Shane arrived, I chose a big gray horse that looked easygoing, while David chose a spirited sorrel. We were off on our hour-plus ride through the pastures and the Great Trinity Forest, one of the largest urban forests in the country. Along the way, Shane told us stories and pointed out feral hog signs along the trail. Besides a few chickadees calling, we didn't see or hear much other wildlife, maybe due to the recent rains that left our horses trudging through multiple muddy messes.

After horseback riding, we headed into the city with dinner on our minds. To lessen the impact of the smells of campfire and horses emanating from our clothes, we chose an outdoor venue. We parked downtown and walked over to Klyde Warren Park (opened in 2012), which sits on the overpass of Woodall Rogers Freeway. This outdoor park is filled with open green space, a large stage, a playground and a dog park, and also offers mini-golf, foosball and (our choice) ping-pong. An intense three-game series kept us engaged for the next hour as we battled for bragging rights.

I lost, but I was able to drown my sorrows in some great street food. Lining the edge of the park are food trucks of various cuisines, everything

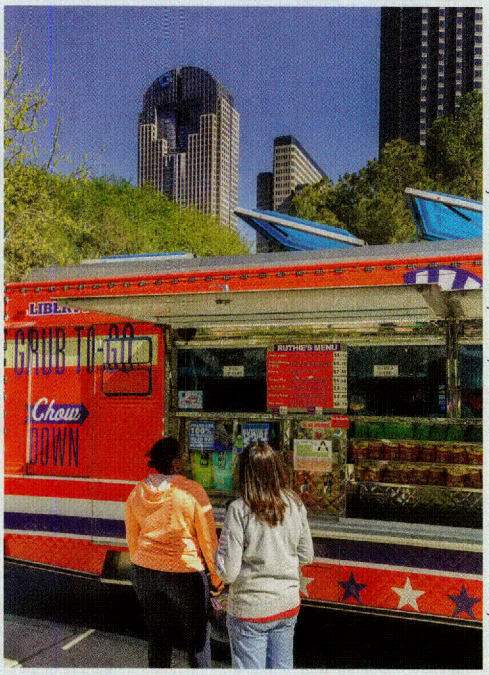


PHOTO LEFT PAGE BY SONJA SOMMERFELD/TPWD. RIGHT PAGE BY EARL NOTTINGHAM/TPWD

FEATURED ATTRACTIONS (LEFT - RIGHT):

- ✭ Downtown and Trinity River
- ✭ Cedar Hill State Park
- ✭ Klyde Warren Park
- ✭ Ruthie's Rolling Cafe

PHOTO © BENJAMIN HOFFMAN

MORE INFO:

CEDAR HILL STATE PARK
tpwd.texas.gov/cedarhill

KAYAK INSTRUCTION INC.
kayakinstruct.com

WHITE ROCK BOAT CLUB
whiterockboatclub.com

TEXAS HORSE PARK
riverranch-texashorsepark.com

GARDEN CAFE
gardencafe.net

KLYDE WARREN PARK
klydewarrenpark.org

from sushi to sandwiches, and we settled on Ruthie's Rolling Cafe, offering "gourmet grilled cheese sandwiches made fresh-to-order." I inhaled the Turkey Trot sandwich with turkey, cheddar cheese and some deliciousness called "slob sauce" on sourdough bread, while David ordered an Italian Hippy — chicken, mozzarella, grilled tomatoes and pesto on whole grain wheat.

We headed back to Cedar Hill State Park to explore the Penn Farm Agricultural History Center before sunset. Settled by John Anderson Penn in 1854, the farm features reconstructed and historical buildings and old farm remnants from times long ago in Dallas County. Visiting families snapped photos in front of the old barn, in the lush green grass and underneath the windmill. We bounced around the fascinating structures and took the opportunity to run free in the open fields.

In perfect weather, Cedar Hill is an ideal getaway — close to Dallas, yet filled with the experience of the great outdoors. The next morning, though, the water in Joe Pool Lake at the park had high waves that rivaled ocean crests. In this rough weather, we decided to forgo a morning fire and instead headed to town for hot coffee

Above and below: *Kayakers take on the Dallas Wave whitewater area on the Trinity River. The breakfast menu at the Garden Cafe offers something for everyone in a laid-back neighborhood atmosphere.*
Opposite page: *The Children's Park at Klyde Warren Park is an imaginative place with playgrounds, interactive fountains and an amphitheater.*

PHOTO BY EARL NOTTINGHAM / TPWD

PHOTO BY EARL NOTTINGHAM / TPWD

and a big breakfast. We arrived at Garden Cafe, located in a neighborhood near the popular Lower Greenville area, before the crowd hit. I ordered a veggie omelet that came with a huge homemade biscuit, while David gorged on a traditional Texas breakfast of pancakes, eggs, hashbrowns and toast. Garden Cafe has a huge outdoor patio with gardens and a fire pit.

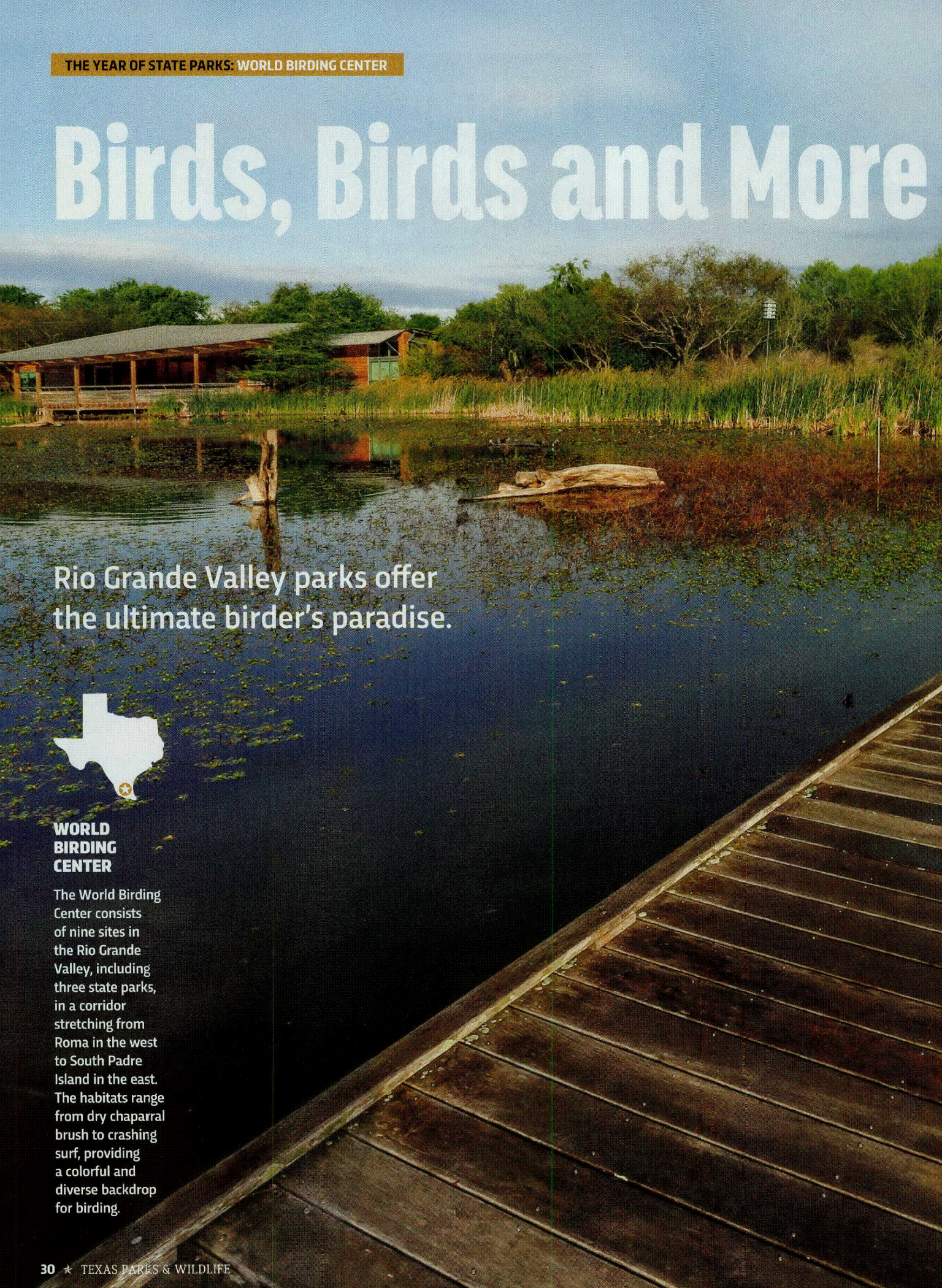
Our bellies full, we took off on our last outdoor adventure. Pulling into a lot at White Rock Lake near the heart of Dallas, we dodged the cyclists, runners and rollerbladers who were enjoying the 9-mile lake trail. We met Robert and Lillian Hunt, members of the White Rock Boat Club, to embark on our first sailing experience.

After a few lessons, Robert would yell out, "Tacking!" and David, Lillian and I would scramble to pull ropes into place. The wind may not have been strong that day, but the views of the lake and the perspective from inside the boat were inspiring and thought-provoking. We chatted about beaver sightings, careers and life outdoors in Dallas until almost sunset, just as we drifted back to the dock.

We took advantage of outdoor adventure in Dallas but didn't even experience all that's offered there. If you've not experienced the "life's better outside" aspect of city life, just dig a little deeper. You never know what you'll uncover. ✯

Naima J. Montacer is a biology professor and freelance writer in Dallas.

Birds, Birds and More



Rio Grande Valley parks offer the ultimate birder's paradise.

WORLD BIRDING CENTER

The World Birding Center consists of nine sites in the Rio Grande Valley, including three state parks, in a corridor stretching from Roma in the west to South Padre Island in the east. The habitats range from dry chaparral brush to crashing surf, providing a colorful and diverse backdrop for birding.

Birds

Wetlands and boardwalks provide good looks at birds at Estero Llano Grande.

PHOTO © SETH PATTERSON

ESTERO LLANO GRANDE STATE PARK
3301 S. International Blvd.
Weslaco, TX 78596
(956) 565-3919
Open: 8 a.m. to 5 p.m.
Entrance fee: $5 for adults

BENTSEN-RIO GRANDE VALLEY STATE PARK
2800 S. Bentsen Palm Drive
Mission, TX 78572
(956) 584-9156
Open: 7 a.m. to 10 p.m.
Entrance fee: $5 for adults

RESACA DE LA PALMA STATE PARK
1000 New Carmen Ave.
Brownsville, TX 78521
(956) 350-2920
Open: 7 a.m. to 10 p.m.
Entrance fee: $4 for adults

More Information
www.texasstateparks.org

THE LOWER RIO GRANDE VALLEY — the ancient delta of the river from Falcon Lake to the Gulf of Mexico — contains resacas or oxbow lakes, Tamaulipan thorn woodlands, marshes, wetlands and forest. Thanks to these diverse habitats and the Valley's location in the Central Flyway of migrating birds, more than 500 bird species have been recorded in this area, an astounding avian array.

BY MELISSA GASKILL

PHOTO © LARRY DITTO

Less than 5 percent of the area's natural habitat remains, however. In the late 1990s, that alarming fact spurred the Texas Parks and Wildlife Department, six local communities and the U.S. Fish and Wildlife Service to launch the creation of the World Birding Center. Today, the WBC consists of nine individual sites, including three state parks: Bentsen-Rio Grande Valley, Estero Llano Grande and Resaca de la Palma. Together, the parks safeguard nearly 2,200 acres that are home to hundreds of species of birds and other wildlife — places for visitors to experience nature and the landscape of the Valley very close to its original state.

I walk into **Bentsen-Rio Grande Valley State Park** early one morning to a cacophony of calls from trees lining the road — the boisterous clatter of chachalacas, squawks of woodpeckers and cooing of doves. These 798 acres once resembled the patchwork of many of our state parks, with tent and RV campers and day-trippers driving in and out. But its transformation to a WBC site in 2004 included elimination of all traffic except bicycles and a park tram. That was an intentional, and monumental, decision, says Russell Fishbeck, former regional parks director over the Rio Grande Valley area and now deputy director of state parks.

"As a day-use park, it is safer without traffic and offers a much-improved wildlife-watching and nature experience," he says.

Exploring along the roads and eight miles of trails on foot, I concur. My ears hear only the breeze, the rustle of lizards and other creatures in the grass, and the bird chatter. I can stop and gaze into the trees to seek the source of those sounds without fear of blocking traffic. Throughout the park, bird feeders hang in open areas, mobbed by brilliantly colored green jays, golden-fronted woodpeckers and great kiskadees with lemon-yellow bellies. Other birds sighted at the park include the buff-bellied hummingbird, eastern screech-owl and northern beardless-tyrannulet — a total of 358 species have been recorded here.

The Resaca Vieja Trail winds through trees and brush alive with cheeps, chirps and squawks; the platform at Kingfisher Overlook surveys a large oxbow lake. On the far side of the park, the 1.8-mile Rio Grande Trail takes me to the edge of the country, the Rio Grande, although I can't see it through the brush. From the two-story-high Hawk Tower, though, I have a bird's-eye view (pun intended) of nearby Mexico and the tree canopy. In addition to resident raptors such as white-tailed kites and gray hawks, many other species migrate past the tower during spring and fall, including Swainson's and broad-winged hawks.

I've enjoyed my walk but am glad to see the park shuttle pull up, as I still have much ground to cover. Back at park headquarters, I take a turn through an exhibit hall thoroughly covering the world of birds, from bills and feet to habitat, wing type, sounds, size, nests, food, migration and more. A smarter visitor might have stopped here first.

Park biologist Amber Schmitt says tram tours run once an hour, and staff also lead guided bird walks. Primitive camping is still allowed in the park.

Estero Llano Grande State Park, formerly agricultural fields, became a WBC site in 2006. Its 230-plus acres, also free of car traffic, take in a shallow lake, woodlands and thorn forest, along with a wildlife-viewing deck, boardwalks and five miles of trails.

Birds and other wildlife love water; this park contains the largest wetlands environment in the WBC. Hundreds of waders and shorebirds flock here, especially in late summer when water becomes scarce in these parts. Reported sightings include threatened wood storks, colorful roseate spoonbills, ibis and migrating waterfowl such as ducks. The park's woodland and thorn scrub harbor Altamira orioles and, sometimes, tropical red-crowned parrots and green parakeets.

From the visitors center, I follow a trail past Ibis Pond and Dowitcher Pond, where turtles sun themselves, onto the Camino de Aves Trail, a 1-mile loop through the brush. At Alligator Lake, I spend a few minutes on the observation deck looking, unsuccessfully, for the lake's namesake reptile before continuing to the top of a levee for a view of the Llano Grande.

The next turnoff leads to the Spoonbill Trail, which circles Ibis Pond back to where I started. On the other side of the entrance road, lanes of a former RV park have become the park's Tropical Area, which attracts rarities such as the rose-throated becard, white-throated thrush and crimson-collard grosbeak. The short, narrow Green Jay Nature Trail loops through woods so thick they feel like an enchanted forest.

This park shelters more than 300 bird species, with a record 115 spotted from the deck in one day. Estero Llano Grande offers the best chance to spot the heavily camouflaged common pauraque. Most of the trails accommodate wheelchairs, and tram tours are offered on certain afternoons by reservation. Park staff also offer regularly scheduled guided bird, butterfly and dragonfly walks.

Brownsville's **Resaca de la Palma**, which opened as a WBC site in December 2008, had no prior development. That, says Fishbeck, meant the department could design it more or less from scratch.

From top: The elevated ramp at Bentsen-Rio Grande Valley provides a tree-top look at the park's diverse habitat. Great kiskadees are a treat for South Texas bird watchers. Resaca de la Palma contains the largest tract of native habitat in the World Birding Center network. **Opposite:** Colorful green jays add tropical flair to the bird life of the Rio Grande Valley.

To cover these 1,200 acres more efficiently, I rent a bicycle — a great deal at $5 for the entire day, basket included. I pedal the tram road to Mesquite Trail and follow its meandering to the aptly named Mexican Olive Trail, then through thick woods to an observation deck over a resaca. After soaking up the view there, I take Flycatcher Trail, with a detour on Hog Trail to another observation deck. Hunter's Lane leads further south along the resaca, where two loop trails go in opposite directions. I choose Quail Loop and, after that, follow the road back to headquarters. (Sometimes parts of these trails flood, so check with park staff before striking off.)

Visitors here frequently sight colorful nearctic-neotropical migrants such as summer tanagers, American redstarts and yellow-breasted chats. Around water-filled resacas, least grebes, black-bellied whistling ducks, purple gallinules, herons and migrating waterfowl congregate, and dense ground-level vegetation attracts species such as the olive sparrow, long-billed thrasher and white-eyed vireo. Park staff lead bird and butterfly walks, nature hikes and tram tours.

These three parks aren't just for the birds, or birders. With their natural habitat and focus on interpretive and educational programming, they offer everyone a rare taste of the Rio Grande Valley as nature designed it.

Buen provecho. ★

Melissa Gaskill of Austin is writing all 10 cover stories for the Year of State Parks series.


PHOTO BY CHASE FOUNTAIN / TPWD

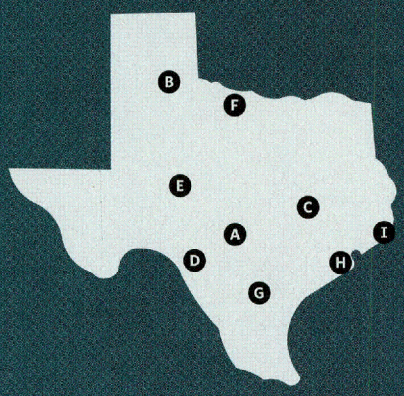

PHOTO BY CHASE FOUNTAIN / TPWD


PHOTO BY EARL NOTTINGHAM / TPWD

THE YEAR OF STATE PARKS

NINE PARKS WHERE YOU CAN WATCH WILDLIFE

One highlight of visiting our great state parks is the possibility of seeing wildlife — everything from birds at our cover-story parks in the Rio Grande Valley to armadillos, bison, alligators, bears and snakes at other parks across the state. Here's just a sampling of parks that offer a chance to get an up-close view of fascinating wild creatures.



By Dale Blasingame

A OLD TUNNEL STATE PARK →

Ready for a dramatic bat show? Here's your spot. Three million Mexican free-tailed bats reside inside the old railroad tunnel from May to October. You can observe their evening flight from two different viewing areas (call for emergence times). Don't forget to stop by for a burger next door at Alamo Springs Cafe.

PHOTO BY EARL NOTTINGHAM/TPWD

PHOTO © LAURENCE PARENT

↑ B CAPROCK CANYONS STATE PARK

Caprock Canyons is the equivalent of an all-you-can-eat buffet when it comes to wildlife viewing. The big draw is the bison; the official state herd lives here. There are prairie dogs, foxes, rabbits, 14 types of lizards, 30 species of snakes and 175 species of birds — but who's counting?

C LAKE SOMERVILLE STATE PARK

My hike at Lake Somerville started off simply enough, with cute rabbits and a giant turtle. Gorgeous whitetail bucks roam the park, obligingly posing in majestic stances for visitors' photos. Note: A few units are still closed from last year's floods.

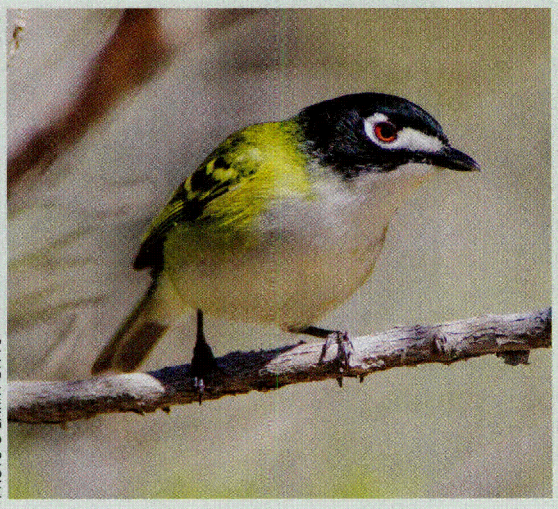


PHOTO © LARRY DITTO

← D KICKAPOO CAVERN STATE PARK

Kickapoo Cavern is a place for birds and bats. It's a breeding spot for the endangered black-capped vireo. The park's caves provide a home for Mexican free-tailed bats; they live here from spring to fall, with their own dramatic evening flights.

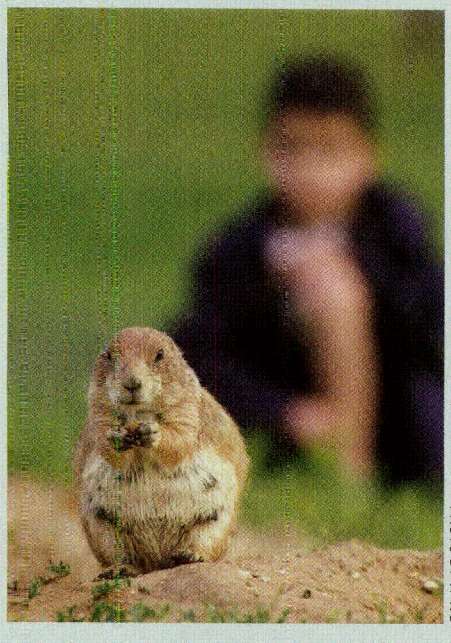


PHOTO BY TPWD

↑ F LAKE ARROWHEAD STATE PARK

Who can resist the adorable little critters at Lake Arrowhead's black-tailed prairie dog town? They tend to be a little shy, though, so bring your patience (and move ever so slowly) to get some great pictures.

G CHOKE CANYON STATE PARK →

Just like our cover-story parks (the World Birding Center), Choke Canyon holds a special place in the hearts of bird watchers. Recognized by the American Birding Association, the park boasts a number of birds, including the crested caracara (Mexican eagle).

E SAN ANGELO STATE PARK →

You can find members of the official state longhorn herd here, and they tend to graze along a fenceline that makes for easy pictures. The bison seem willing to pose as well. If you're lucky, you'll get to see a baby bison or two.

PHOTO BY B TPWD

PHOTO © LARRY DITTO

PHOTO © ANDREW MCINNES

← H BRAZOS BEND STATE PARK

You've probably heard about the alligators here, found in three lakes at Brazos Bend. Don't forget that 290 species of birds have been seen in and around the park, along with 21 types of mammals, including bobcats and otters. There's a great nature center, too.

I SEA RIM STATE PARK

Sea Rim is also known for its alligators. Make sure to walk the boardwalk through the marsh or paddle the 10 miles of trails to get the best view. Look for the resident ghost crabs and a number of bird species, including the roseate spoonbill with its 50-inch, hot pink wingspan.

How to Fledge a Birder

THE PLEASURES OF PASSING ALONG A PASSION FOR BIRDS.

by Cliff Shackelford
Photos by Earl Nottingham

Last year, my wife and I led a bird walk at an outdoor event at the Pineywoods Native Plant Center at Stephen F. Austin State University in Nacogdoches. Up walked a young girl to join our group, sporting not only the usual binoculars but also a unique green jacket covered in a birdy print.

That began my introduction to sixth-grader Hadley Watts (and her mother). I don't meet a large number of "fledgling" birders, and this young lady's extraordinary jacket hinted at real passion. After introductions, Hadley's mom asked her to tell us what she wants to be when she grows up.

"An ornithologist!" Hadley answered firmly and swiftly. I couldn't believe my ears — here was someone else who had gotten the birding "bug" early in life.

Let's back up nearly four decades in Dallas, where I, too, was a budding birder eager to learn all I could about birds. At first, my parents, both non-birders, didn't really know how to encourage my passion. They thought my love for birds was just a phase some youngsters go through, like those who bring home a frog or turtle they catch, hoping to keep it as a pet.

One day my parents found a Dallas Audubon Society flier tacked to a pegboard at our local library. That's when things began to change for me. An upcoming birthday brought me new binoculars and Roger Tory Peterson's *Field Guide to the Birds of Texas*.

That paper newsletter on the library wall was social media at its finest

in the late 1970s. That's where I found out about upcoming meetings and eventually something called the Christmas Bird Count, where volunteers were needed. *Bingo!*

By this time, I was a young teen, so my dad phoned the local count's organizer and found me a spot in a vehicle with a few seasoned birders. Amazing. Not only was I surrounded with like-minded folks, but I saw a few lifers. A "lifer" is what you call a species the first time you see it — it's something new in your life.

I was hooked. Now that I am approaching the mid-century mark of my life, I'm still hooked, with no signs of quitting.

Back to Hadley, our fledgling birder. As our walk began, we asked Hadley what species she wanted to see most.

"A nuthatch — I've not seen any of the nuthatches before," she said. Lucky for us, two species of year-round nuthatches can be seen fairly regularly on the Pineywoods Native Plant Center grounds. It didn't take us long to find a brown-headed nuthatch, a tiny bark-clinging bird, and we watched for several minutes as it pecked on a large dead tree trunk, just five feet above the ground and less than 20 feet away from us. Now that's the way to get a lifer, I thought. Even the seasoned leaders couldn't remember a better view of a nuthatch. (With Hadley's good luck, I joked that her next request should be the extinct ivory-billed woodpecker.)

She likes everything "birdy" — from crafts and photos to parakeets as pets. Her gym bag has hummingbirds all over it. Her T-shirts? Yep, they're covered with birds. Can you guess her preferred topic for school reports? Everyone at her school knows she's crazy about birds — the principal once rewarded her with bird stickers.

When Hadley visits her friends' houses, the girls' bedrooms are covered in posters of popular musicians and actors. When those girls come over to Hadley's house, they find her bedroom walls covered in posters and photos of birds. She's got "the bug," and everyone around her knows it.

The bird that hooked Hadley was a blue jay, followed soon by a northern cardinal. While playing youth soccer, she spent more time watching birds flying over the field than watching the ball. For her 10th birthday, Hadley requested "only birdy gifts, please," including a birdbath, bird feeder, movies about birds, bird games and bird figurines.

Later came a cellphone with a birding app to help identify birds by sight and sound. (I sure could have used that when I was a kid long ago.) Then came a drone that Hadley flew in her yard in an attempt to get closer looks at birds. She walked with binoculars around the neighborhood,

rewarded with observations of cedar waxwings and American robins.

During our annual spring migration birding trip to the Upper Texas Coast (including a stop at Sea Rim State Park), my wife and I met up with Hadley and her mom once again, and showed them a multitude of birds: colorful warblers, sluggish vireos, lanky herons and busy shorebirds. Months later, Hadley and her father joined us on a cold evening for an Owl Prowl at Mission Tejas State Park in East Texas. I hooted up a pair of barred owls for the more than 40 attendees, including a good number of young people, but I made sure Hadley had a front-row seat.

I'll continue to make sure that Hadley has opportunities to pursue her passion and add more species to her life list. Watching a new birder grow and develop is the best kind of sighting.

If you have fledgling birders or naturalists in your home or neighborhood, be sure to encourage them so the interest can remain a lifelong passion instead of just a passing phase. Being closer to nature and all its beauty will make a child's life journey enjoyable and rewarding. ★

Cliff Shackelford has been the statewide ornithologist for the Texas Parks and Wildlife Department since 1997.

10 tips to encourage that fledgling birder in your family or neighborhood

Ensure that your birders have their own pair of binoculars and a field guide (aka "bird book"). Always keep these items handy. A bird app should be on everyone's cellphone.

Find a local birding club or Audubon chapter whose experienced birders can help and point you in the right direction. Attend as many guided field trips as possible because you'll learn and see a lot.

Make birding a family event as Hadley and her parents have done – birding is a great excuse to spend time together exploring your region and beyond. Use TPWD's Great Texas Wildlife Trails to help find new locations to go birding. The state's trail maps can be found online at ***tpwd.texas.gov/wildlifetrails.***

Vacations and weekend excursions don't have to be 100 percent birding, but at least some percentage should be. This will keep the fledgling birder in your life very happy. My school-age kids enjoy not only looking at birds but also other critters like turtles and snakes.

Encourage conservation to all youth. Doing good things for birds and other wildlife is healthy for all of us. Birds are important neighbors to humans whether we realize it or not (birds can help keep insect and rodent numbers in check, pollinate our flowers and crops, clean up roadkill and more).

Consider sending your fledgling birder to a summer camp where birding and other nature-related activities are the main theme.

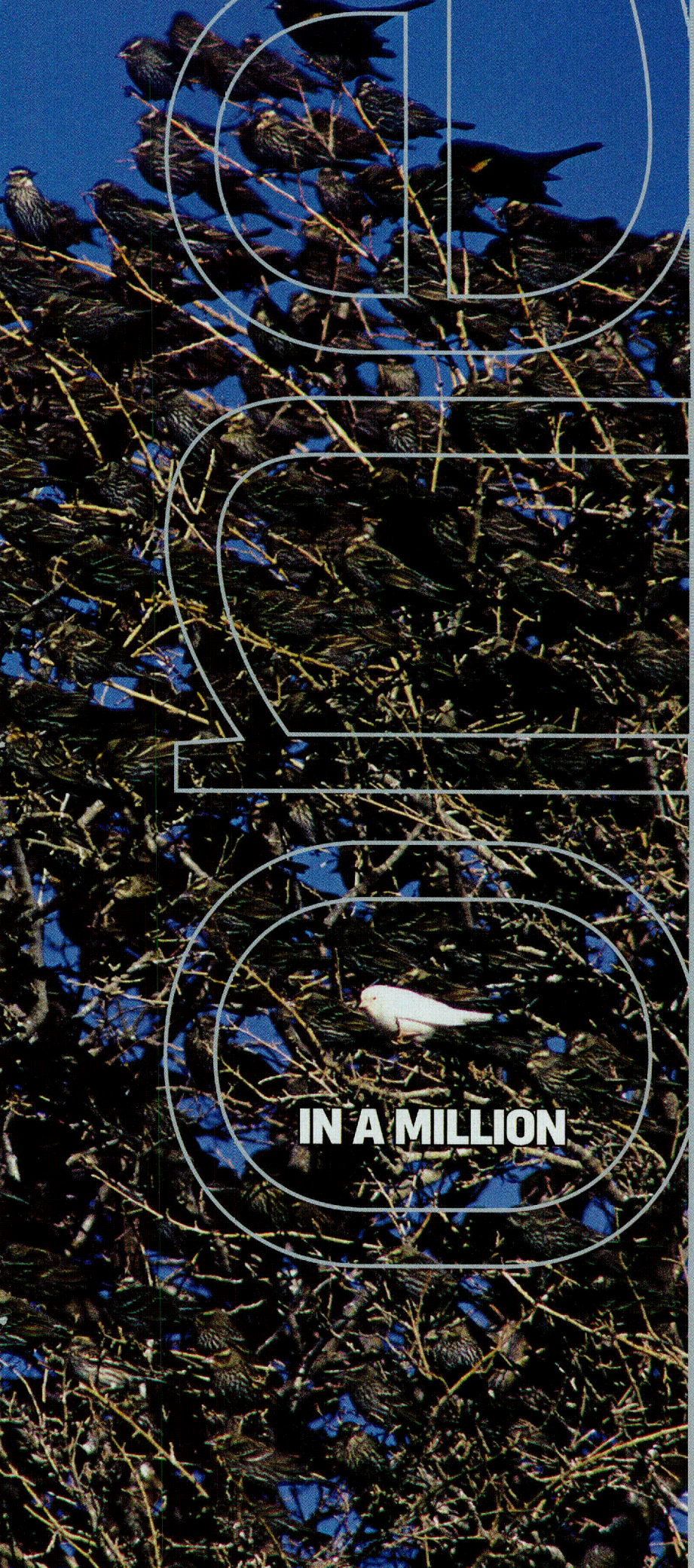
Encourage your fledgling birders to keep records of what they've seen. Services such as eBird and iNaturalist make data entry easy from any computer or smartphone. This also allows them to contribute as young citizen scientists.

Spritz up your backyard or property with bird feeders, birdbaths and, most importantly, a wildscape (landscaping for wildlife as seen at ***tpwd.texas.gov/wildscapes***). The best place to watch birds is where you spend the most time: home! It's difficult for any skill level of birder to beat backyard birding.

Encourage young people to save their hearing by wearing ear protection in loud situations. Birds are best detected by song, so we need the ability to hear them.

Visit places with live birds, such as zoos. One of Hadley's most memorable experiences was walking in an aviary at the Caldwell Zoo in Tyler and having birds fly all around her. As morbid as it sounds, museums with dead birds work well, too. As a kid, I encouraged family visits to the Dallas Museum of Natural History at Fair Park, where I repeatedly stood and stared at the pair of ivory-billed woodpeckers they had on display.

Veteran wildlife photographer Wyman Meinzer shares images of his rarest finds.



IN A MILLION

For half a century, my wanderings throughout the vast state of Texas have offered many opportunities to encounter subjects of intrigue, whether they be skies, landscapes, cultures or wild creatures indigenous to the land. With a camera in tow, I have tried my best to document these interesting features and have collected hundreds of thousands of images that define much of what I have seen.

Perhaps the most unusual subjects are found within the diverse menagerie of our natural fauna – specifically, genetic anomalies of coloration that occur periodically in all species. In this photo essay are examples of a few that I've encountered during the 40-odd years of my time with camera in hand.

BY WYMAN MEINZER

COLOR ANOMALIES

ALBINISM: Rare condition characterized by little or no color in the skin, hair and eyes.

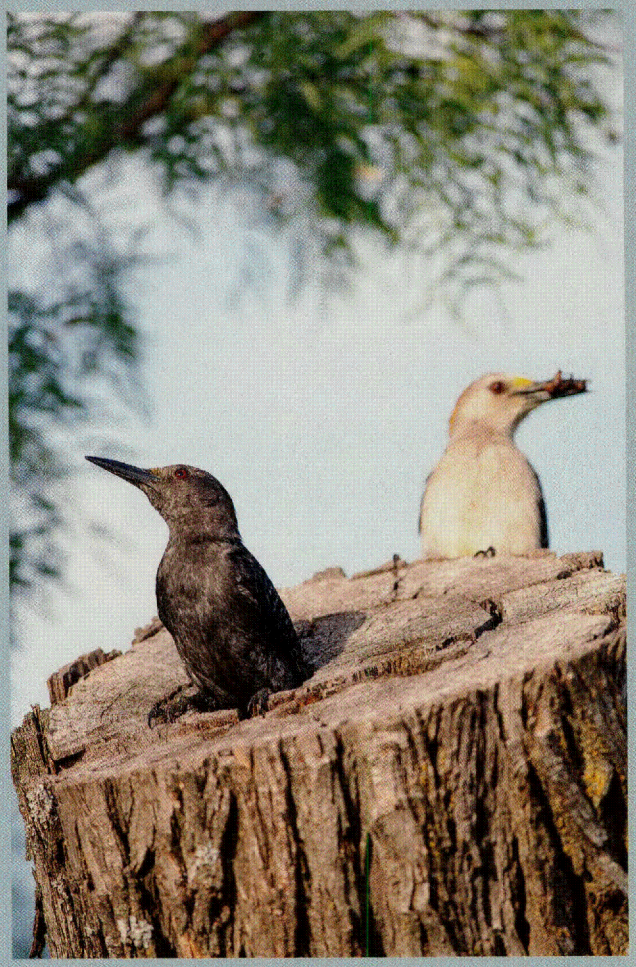
MELANISM: Abnormal development of dark pigmentation in the skin, hair, feathers, etc.

LEUCISM: Condition characterized by white or patchy coloration of the skin, hair or feathers, but not the eyes.

←
PREVIOUS SPREAD

In 1993 I was out on the Llano Estacado shooting images for a book project on playa lakes. These bodies of water are magnets for a wide diversity of bird species, not the least being red-winged blackbirds. In one of my travels onto the High Plains, I drove past a grain field and observed a very large flock of red-winged blackbirds flying in formation. They soon landed in a solitary tree, en masse, creating a virtual wall of dark feathers against the cloudless blue sky. A contrasting element caught my eye, and upon closer inspection, I was astonished to see a single snow-white albino blackbird in the flock, pink eyes and all!

In the wild community, albinism is a rare anomaly in which a creature's body does not produce melanin, or pigment cells. Unlike leucism, which also causes light coloration but is accompanied by low levels of melanin, albinistic creatures do not exhibit pigmented features and instead exhibit white feathers or fur and have an aberrant eye color, usually pink.



It is rare to encounter two color anomalies, much less of the same species, even in a lifetime of venturing in the wilder areas of our great state. In this case, I was fortunate to see and photograph the golden-fronted woodpecker in both melanistic and leucistic phases of color, although many years and several miles apart. Melanism is a genetic mutation that causes the feathers to have a higher concentration of melanin, resulting in a darker pigmentation than the normal color scheme of the species. In this photo of a nesting pair of woodpeckers, one with a melanistic phase emerges from a nest that is located in the decayed center of an old mesquite tree. Some theories suggest that melanistic creatures are more likely to survive predation due to their darker, more camouflaged coloration. This particular woodpecker flourished in the same area for three years before finally disappearing, not to be seen again.

The woodpecker with the leucistic color phase was photographed many years earlier and perhaps 20 miles north of where the melanistic bird was found. Leucism produces light-colored feathers in birds, and the still-present (but lower-level) melanin allows for the dark eye coloration that is absent in albinism. I saw the white woodpecker only once, and was able to grab this image before it fluttered away through the mesquites.

Having been scientifically recorded in Texas only six times by 1994, the patternless diamondback rattlesnake is possibly a genetic anomaly specific to certain regions in the state. Two specimens were collected in Haskell County, two in Williamson County, one in Comal County and another from an unknown area. More recently, another specimen, shown in this photo, was found in Haskell County in 2007.

The snake exhibits the normal physical features of a rattlesnake — pit viper head and rattle — but the coloration of this patternless specimen is distinctly different from the typical diamondback. With uniform light brown skin coloration and no diamond configurations, and a black tail instead of the black and white rings, the reptile has the color attributes of certain racer snakes.

One early morning many years ago, a cowboy approached me for conversation, intimating that he knew where a "white roadrunner" was hanging out. I suggested that he contact me as soon as he saw the bird again, and within a few days he called to say the chaparral was snooping around his house and barn. Within a few minutes of arriving at the location, I spotted the cream-colored leucistic paisano and spent over an hour photographing the creature, knowing well that the color aberration would make the bird susceptible to predation. After the photo session was over, I never saw the bird again, but I was satisfied in knowing that I had immortalized this avian oddity on photographic medium to someday share with a reading or viewing audience.

During the whitetail rutting season some 30 years ago, while photographing in South Texas, I was on a ranch near Riviera "rattling horns" in an attempt to attract a buck to my location. Within a few minutes I was startled to see this young buck approach close enough for a photo. The buck shows evidence of leucism, characterized by white hair. Although light in body color, leucistic creatures still possess the body cells that produce melanin, thus the dark eye coloration.

After walking into the Benjamin post office one day several years ago, I was summoned by the postmaster and informed that he had recently seen a white mockingbird near his home, only a couple of blocks away. Since his last sighting was on that very morning, I grabbed my Canon 500mm lens and headed down the road. Within minutes I could see the state bird of Texas and observed that it was a true albino that was almost snow white and exhibiting the characteristic pink eye coloration. It took me several attempts to photograph the bird because of its desire to stay in the shadows, perhaps aware that its unusual coloration would make it more vulnerable to predators. Sure enough, I never saw it again after that day.

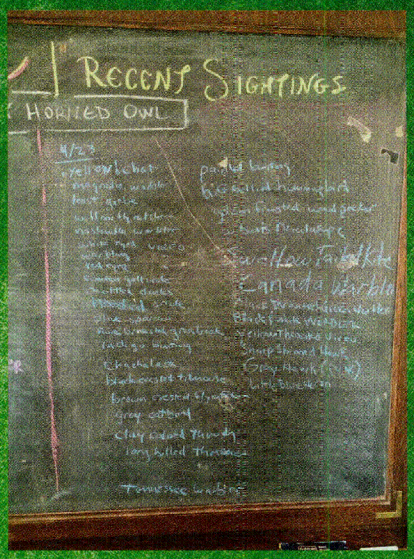
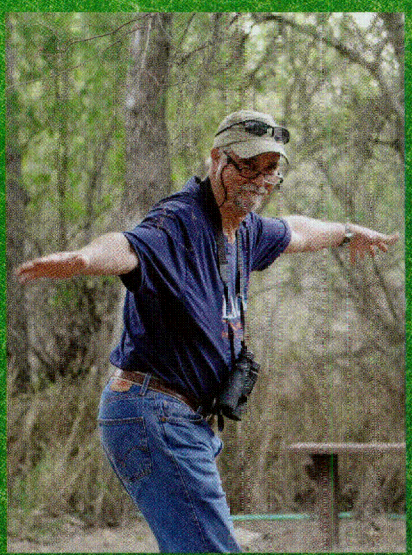


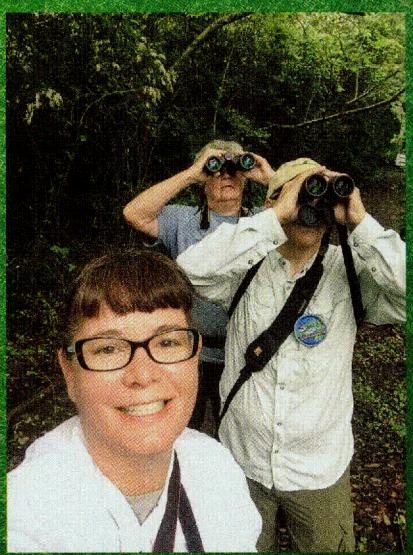
PHOTO © THOMAS NILLES

THE FAMILY THAT BIRDS TOGETHER...

Birding Classic road trip unites family members in a quest for togetherness and a bunch of birds.

BY JENNIFER BRISTOL





ALL OTHER PHOTOS BY THE AUTHOR

When I was a teenager, I never woke up until my mother made a third trip into my room to give me a final warning. I would lumber out of bed, get dressed, mumble something and get in the car to either go to school or off on an outdoor adventure with my family. Thirty years later, the tables have turned, and now it's my turn to make the trip down the hall to my mother's motel room to give her the final call to rise and shine for another day of birding in the Great Texas Birding Classic competition.

PHOTO © PHIL SCOTT

Clockwise from top left: *A young birder at the Pedernales Falls bird blind; a list of recent sightings at Paradise Pond in Port Aransas; Jennifer and Valarie Bristol looking across the Rio Grande at Santa Ana National Wildlife Refuge; happy birders Jennifer Bristol, Thomas Nilles and Valarie Bristol at High Island; "Flying Phil Scott" doing the bird dance to call in the birds; waiting patiently in the bird blind at Bentsen-Rio Grande Valley.* **This page:** *Enjoying a moment of excitement with fellow birders and staff at Estero Llano Grande.*

My mother got me and my uncle hooked on birding. She was thrilled when I married a man who loved to hike, camp and bird-watch as much as I do. When it was time to choose members for my Great Texas Birding Classic team, my top draft picks were right in front of me.

Even though she may not be an early riser by nature, my mother is still a premier birder who has spent most of her career helping set aside land for conservation purposes. My nearly deaf uncle cannot hear the birds but is an excellent spotter who can strike up a conversation with just about anyone. My husband, a casual birder who has a great eye for wildlife photography, is an excellent navigator and a champ on adventures. Myself, I'm a fair birder with bird-dog hearing and a relentless sense of optimism, so between us we have at least one pair of good eyes, one pair of good ears and one brain full of good bird knowledge.

Our weeklong journey took us from Austin to the Rio Grande Valley, along the Texas coast, through the rolling hills and finally to the Lost Pines of Bastrop. We traveled almost 1,000 miles through rain and dust storms to make 22 individual birding stops. We didn't consider the sighting of a red-tailed hawk at the Dairy Queen in Three Rivers an independent birding stop, more of a happy coincidence, but we counted the bird nonetheless.

Competitive birding is an endurance sport with long hours spent in the car traveling from one eco-region to the next to view a different yield of birds. To fill the void, my uncle read to us from *Why Stop? A Guide to Texas Roadside Historical Markers.* My mother would chime in with her vast knowledge about how each park or birding center was created, who purchased or gave the land, what wildlife or resource it contained and what birds we might find there. Each story was shared with fascinating detail and heaps of laughter.

On Padre Island, the weather conditions were favorable, and we experienced a fall-out, the occurrence that every birder covets. During the spring migration, strong cold fronts sometimes cross into the Gulf of Mexico and slow the migrating birds down, causing them to use up their stored energy reserves too quickly. The weary migrants are forced to seek shelter and food as soon as they reach the coast.

Birds were everywhere on Padre, a vast array of them just sitting on the ground, too tired to move. I could hardly keep up with scribbling down the names of the birds as my team members called them out. My husband danced around taking photos, while my uncle made friends with another birding team doing an

event called the Big Sit.

The Great Texas Birding Classic (*tpwd.texas.gov/gtbc*) is celebrating its 20th year this spring. There are multiple levels for individuals, families and groups to participate. Some teams choose to bird from sunrise to noon, while others bird all day within the boundaries of a state park. Lots of teams choose to do a Big Sit, which limits them to staying within a circle 17 feet in diameter while birding. Younger birders can have their own Roughwing or Gliders teams or bird with adults in the other competition categories. A few teams participate in a weeklong competition. The event runs from April 15 to May 15.

At Pedernales Falls State Park, we ran into another multigenerational birding team with two very knowledgeable kids, ages 9 and 12, their mother and grandparents. The 9-year-old helped us spot an endangered golden-cheeked warbler.

Birding is a great way to connect children with nature. Even though our family now goes on long journeys to bird, we started out making observations in our own backyards and then expanded our efforts to local parks. The spring migration is a perfect time to install a simple feeder that brings in the birds while the males are in brilliant plumage, a prime time for kids to observe them.

Birding allows me to slow down and exist in the moment. While a birding competition is purportedly about logging as many birds as possible, patience is needed to observe and identify each species. In years past, I often didn't know what I was seeing or hearing. But with the advent of smartphones and excellent birding apps, I can spot a bird I've never seen before and quickly look it up to make sure I am making an accurate identification. At the end of each day, I post all our observations in eBird, a citizen scientist online database that helps ornithologists track bird movements. It feels great to contribute to scientific efforts so easily.

Our family birding adventure took us through eight separate eco-regions, 21 counties, myriad state parks, national wildlife refuges, birding centers and even a few wastewater treatment plants. We spotted more than 200 species of migrating and native birds. In a single day, we stood on the banks of the mighty Rio Grande, looking out into the wilds of Mexico, then drove 480 miles to East Texas to switch regions.

For our family birding team, it's not about how many birds we spot. Although we're competitive, it's more about the journey for us. I'm already planning where we will travel next spring in the Great Texas Birding Classic. In the meantime I'll find great satisfaction in the birds that enjoy the native plants in my yard. ★

Jennifer Bristol is state coordinator of Texas Children in Nature and a founding member of the Scott Free Family Birding Team.

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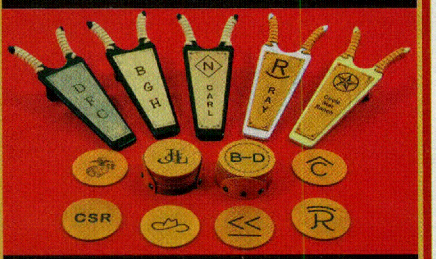

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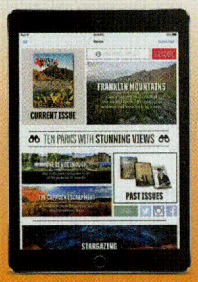

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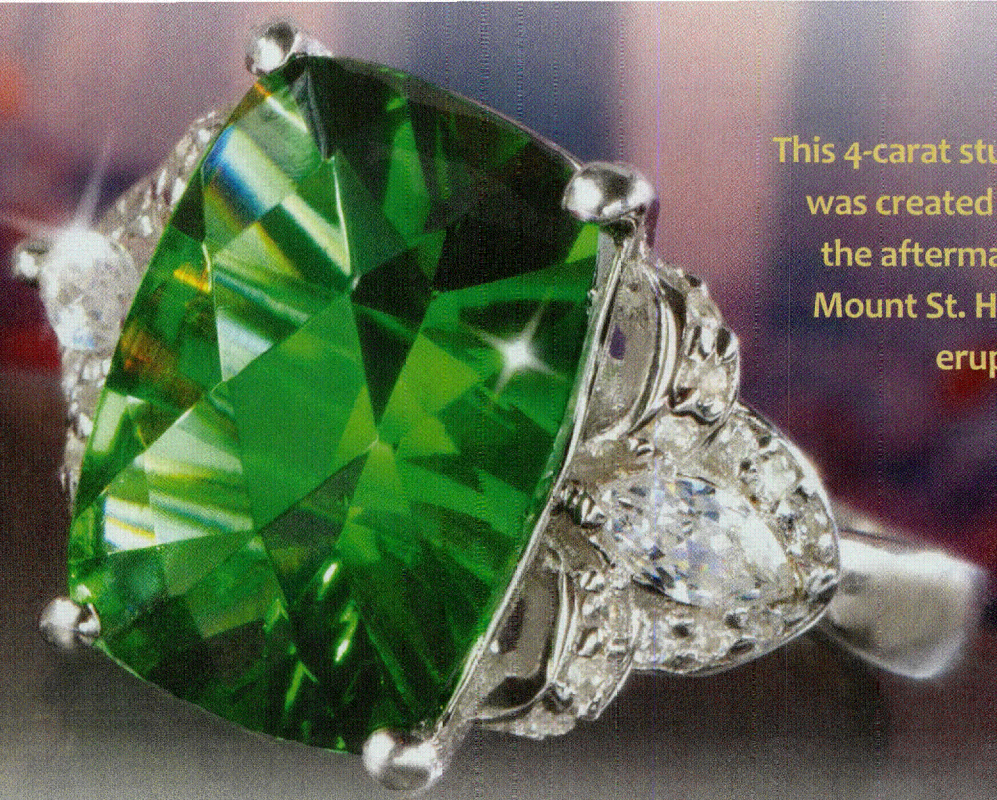

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4 carat Helenite center stone • Lab-created white DiamondAura accents • .925 sterling silver setting • Whole ring sizes 5–10

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"Sacred Guardian"

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In a Collectibles Market First, two American icons unite to bring you the must-have collection of the year — the *Al Agnew Tribal Lights Zippo® Collection*. The Zippo Lighter #218 black matte finish lighter is the foundation of each limited edition that pays unique tribute to the mystique of the ultimate alpha, the mighty wolf, captured in Al Agnew's powerful artwork. Proudly made in the USA, each windproof lighter arrives in a Zippo® -branded individual gift box. A custom glass covered display case — a $100 value — is yours for the same low price as a single edition and it comes complete with a Native American-inspired tomahawk that further illuminates the nature of the wolf.

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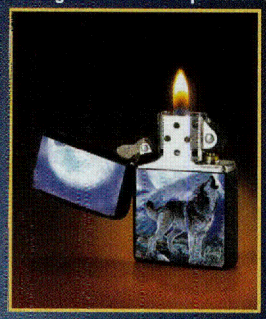
Strong demand is expected for this trailblazing collection limited to only 8,000 complete collections. Act now to acquire each of the seven editions (six lighters and display) at the $39.99* issue price, payable in two installments of $19.99 each, backed by our 365-day money-back guarantee. You'll receive one edition about every other month. You may cancel at any time by notifying us. Send no money now; just return the attached coupon today!



Authentic Zippo® windproof lighters with Al Agnew's wolf artwork

$100 value glass covered display case with Native American-inspired tomahawk

Lighters officially licensed, lifetime guaranteed by Zippo® and made in the USA

Strictly limited to 8,000 complete collections

Distinctive bottom stamp authenticates each lighter as a genuine Zippo® windproof lighter

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Paddleboarding

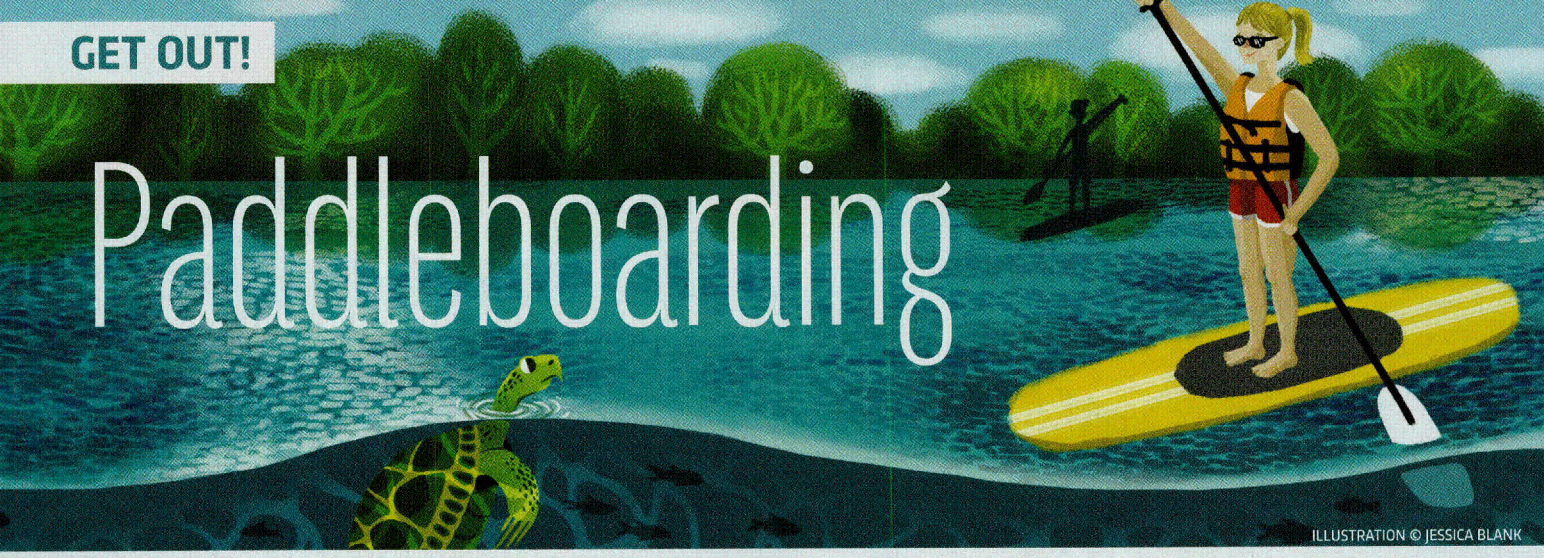


ILLUSTRATION © JESSICA BLANK

STAND-UP PADDLEBOARDING, also called SUP, reduces watercraft to its simplest and most flexible form. Stand-up paddleboarders (aka SUPers) paddle a long, wide board, about 11 feet long, with a one-blade paddle. The sport is growing in popularity, and most onlookers no longer wonder what those "standing paddlers" are doing.

Modern stand-up paddleboarding has its roots in the Hawaiian surfing scene of the '60s. To gain a better perspective, surf instructors stood on oversized boards with paddles to point students in the right direction to catch the best wave.

By Emily Moskal

VERSATILITY. SUP's popularity is attributed to its versatility. The sport's most often done on calm water, so it can be practiced by big populations in inland metropolitan areas, but it can also be done in ocean surf.

FUN WORKOUT. Nick Matzorkis, the founder of SUP ATX, which says it's the world's largest paddleboard company, describes the sport as an "exercise in disguise." The board offers a gentle full-body workout, emphasizing core muscles, all unnoticed as you get caught up in the views and the transcendent glide over the water.

EASY TO LEARN. The stable float offers control on the water; your natural stance empowers your movement, imitating walking on water. The unique perspective and interaction with the water are invigorating, bringing the intimacy of surfing inland. Compared to surfing, which takes days of practice and the pain of hundreds of falls to master, paddleboarding is easy.

"If you can stand on a coffee table," Matzorkis says, "you can stand on a paddleboard."

To maintain your balance your first time on the board, Matzorkis suggests keeping your feet in a wide stance in the middle of your board's length with knees bent. Keep moving and paddling rather than standing still or sitting, and remember, if you do fall (which is unlikely), it's only water.

GEAR. Board types include inflatable, cruiser, distance, surfing, whitewater, yoga, fishing and kids' specialty, but the differences are subtle. The average user can easily utilize the standard, all-around board commonly offered at rental outfitters.

SUP FISHING. Many anglers, particularly fly-fishermen, are taking to the paddleboard to gain an advantage on the water. Paddleboarders look into the water from five to six feet above the water, avoiding the low-angle reflection visibility problem experienced when sitting in a kayak, so fish spotting improves dramatically. You'll be hard pressed to find a craft that can navigate shallower waters; fishing boards submerge only one or two inches below the waterline.

WHERE TO GO. With SUP rentals in most major metropolitan areas, you're sure to find one in your area. In 2015, Austin was named the "number one paddle town" in the country by *SUP Magazine*. Lady Bird Lake in the center of town is undoubtedly the most popular spot in the state. But Austin isn't the only city with great water. With many lakes, rivers, beaches and bays to cruise, SUP rentals have spread across the state. Rentals are available at outfitters in Houston, Galveston, Matagorda, Port Aransas, Corpus Christi, Fort Worth, Dallas, South Padre and Abilene, among others.

INVASIVE SPECIES IN
TEXAS

HELLO ZEBRA MUSSELS. GOODBYE TEXAS LAKES.

Zebra mussels are a destructive invasive species that can spread across Texas by hitching a ride on boats and trailers.

Boats are the primary carrier of zebra mussels.

Zebra mussels can easily attach to a boat's hard surfaces and boaters travel frequently between water basins. Surveyed boaters planned to visit more than 50 Texas lakes in the next 30 days.

FOUND IN 8 Texas Lakes IN ONLY 6 YEARS:

- Texoma
- Ray Roberts
- Lewisville
- Bridgeport
- Lavon
- Waco
- Belton
- Dean Gilbert

1.5 inches

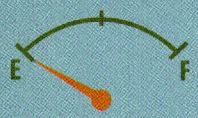
Zebra mussels' size ranges from microscopic (larvae) up to 1.5 inches long (adults).

HUNDREDS of microscopic zebra mussel larvae, invisible to the naked eye, could be present in ONE liter of water.

1,000,000 **Zebra mussel eggs spawned every year by ONE female.**

RECREATIONAL IMPACT

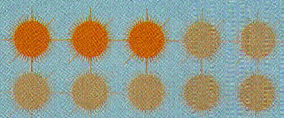
Attached zebra mussels can decrease boat fuel efficiency, damage a boat's finish and clog water pumps.



452 per square inch
Zebra mussels can reach densities of 452 per square inch, covering beaches with sharp shells.

DAMAGE TO THE ECOSYSTEM

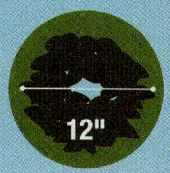
Algal bloom
Zebra mussels caused an algal bloom that led to a "do not drink" order for half a million Lake Erie residents.



70% reduction
Zooplankton have been reduced by 70% in other infested lakes, impacting filter feeding fish, important prey for bass and other sportfish.

FINANCIAL IMPACT

Cost to taxpayers
Zebra mussels can completely clog an entire municipal pipeline up to 12 inches wide.



Decreased property value
Up to 19% in some areas infested with aquatic invasive species.

Stop the spread! 1 Clean 2 Drain 3 Dry

texasinvasives.org/zebramussels

TEXAS PARKS & WILDLIFE

Noted Texas photographer Wyman Meinzer is known for his trademark high-top boots, which, in addition to his cameras, serve as tools of the trade in negotiating thick brush, rocky deserts, sand dunes or snowdrifts. When asked how many pairs of boots he has worn out over the years, he smiled and proceeded to a storage closet where he brought out six pairs of lace-ups that had seen better days. *Texas Parks & Wildlife* chief photographer Earl Nottingham captured the lineup. Meinzer has given away one pair of boots but has kept the rest for sentimental reasons. **TOOLS:** Shot with an iPhone 6. Processed with Photoshop Express app.

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